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BARRIERS TO INNOVATION TRANSFER IN A REMOTE AND RURAL HEALTH, SOCIAL CARE & HOUSING SETTING

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Declaration

I, Annette Gallimore, declare that the following dissertation is entirely my own work and any contributions by others are fully acknowledged.

Abstract:

Barriers to innovation transfer in a remote and rural health, social care & housing setting

Introduction:

The transfer of good practice into a new area is seldom straightforward. This study investigates the process leading up to transfer in a project which aimed to transfer best practice into health, social care and housing in a remote and rural area. The specific practice was the use of electronic tablets for single shared assessment.

The study aimed to answer the Research Question 'What factors enable or hinder successful practice transfer within a remote and rural setting?' This was addressed by asking three main sub-questions:

- how and why did the key people select electronic single shared assessment for transfer?
- what were the attitudes of staff to the electronic tablets for single shared assessment?
- what key issues influenced the process leading up to practice transfer?

Methodology:

A case study design and qualitative research methods were used. Rogers' theory of diffusion of innovations was used to design a framework for assessment of evidence against the broad areas of the diffusion process. It provided a checklist of elements characterising the active process of diffusion of new practice or innovation. Semi-structured interviews were held with key stakeholders in the implementation and management of the transfer of electronic single shared assessment. Documents including progress reports, minutes of meetings and emails were reviewed.

Data was coded and categorised using the qualitative data package QSR N6, a software tool which assists the user to manage data and ideas. Grounded theory was used to analyse and code data. Emerging themes were established against organisational change theory. Themes were then categorised and interpreted against the framework.

Results:

The lack of time for the project lead to drive the project and insufficient slack resources arising from the rural setting were key reasons for the delay in practice transfer. The project focus shifted from the transfer of electronic single shared assessment to the transfer of

improvements to single shared assessment itself. Key aspects of the results reflected theory around the factors influencing organisational change and knowledge transfer.

The framework was successful in providing a structure against which the stages of practice transfer could be checked in relation to organisational change. Three gaps were identified: the framework did not allow for technological change in the arrival of laptops instead of electronic computer tablets; the measurement of time corresponding to the slow progress of the project, and the inability of high level management to resolve the issue of IT incompatibility. None of the gaps significantly affected analysis of the study findings.

Conclusion:

Transfer of good practice requires leadership, resources, and ownership from frontline users. Slack resources, including time, will be key in whether practice transfer will be completed successfully and the new practice sustained across all geographical project areas. More research is needed on transfer of practice in health, social care and housing settings in remote and rural areas.

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1 INTRODUCTION

1.1 Aims and objectives

The aim of this study was to identify factors that enable the transfer of new practice into a new area, new practice being the model for innovation transfer. It investigated and explored the process leading up to the transfer of electronic single shared assessment (SSA) into the Skye & Lochalsh area of the Mid-Highland Community Health Partnership (CHP) project, as part of the Partnerships for Access to Health Project (PATH).

The study aimed to answer the Research Question 'What factors enable or hinder successful practice transfer within a remote and rural setting?' This was addressed by asking three main sub-questions:

- how and why did the key people select electronic single shared assessment for transfer?
- what were the attitudes of staff to the electronic tablets for single shared assessment?
- what key issues influenced the process leading up to practice transfer?

1.2 Background information

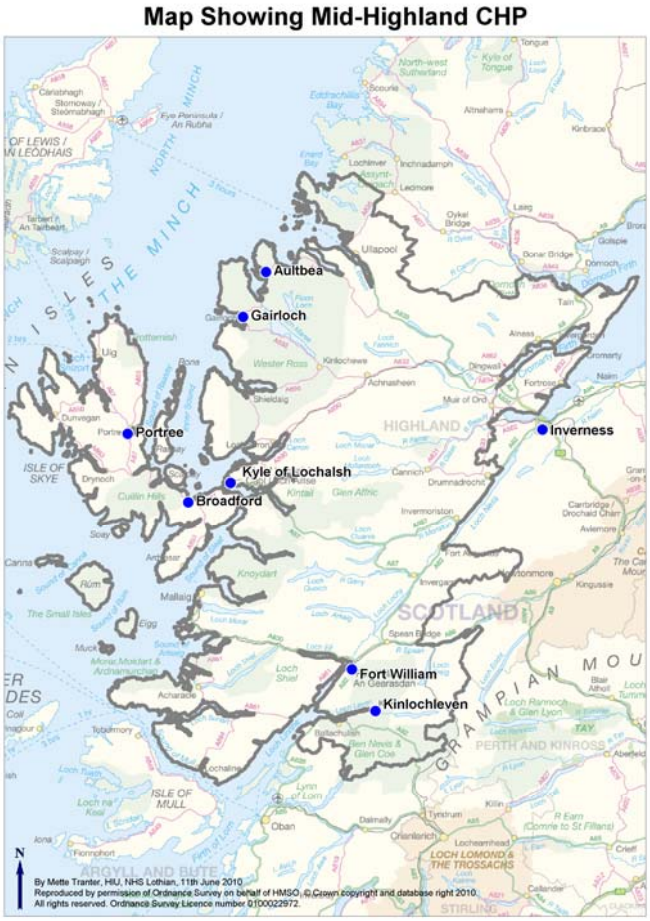
1.2.1 Mid-Highland CHP

Mid-Highland CHP is one of three CHPs within NHS Highland and covers an area of approximately 14,075 square miles and 91,231 people, which includes three localities: Lochaber; Ross, Cromarty and West Ness; and Skye and Lochalsh. It is defined as remote and rural by the Scottish Government. The Skye & Lochalsh locality involved in this study covers approximately 1,042 square miles across the island of Skye and the adjacent mainland area of Lochalsh (www.nhshighland.scot.nhs.uk). The two areas identified for practice transfer were Kinlochleven in the Lochaber locality (1,878 square miles) and Gairloch/Aultbea in Ross, Cromarty and West Ness (2,400 square miles). All three localities share characteristics of low population density, remote and rural geography, and an increasing elderly population (SMCI Associates, 2008).

Mid-Highland CHP provides primary care and community health services as well as hosting out of hours support services. Acute services are provided at Belford Hospital, Fort William and Mackinnon Memorial Hospital, Broadford, Skye (www.nhshighland.scot.nhs.uk).

Figure 1 on the next page shows the geographical setting of Mid-Highland CHP. The CHP boundary is marked with a grey line.

Figure 1:



Management in Mid-Highland CHP in relation to NHS Highland was as follows: The project lead reported to the Mid-Highland CHP General Manager, who was supported in their role by a CHP Management Team. This team included the Clinical Director, other clinical leads such as the Nurse Lead, and human resources, and reported to the CHP Governance Committee, NHS Highland. The Management Team (along with other CHP Management Teams) also came under the NHS Highland Direct Health Services Operational Decision Making Group. The Clinical Director (and clinical leads) also reported to the Medical Director, NHS Highland (NHS Highland, 2011).

1.2.2 Electronic tablets and single shared assessment

The Mid Highland project aimed to transfer in a new practice, the use of computers in an electronic tablet format, to speed up and improve the quality of single shared assessment (SSA) for people with alcohol problems, who are homeless or are aged over 65 years and

have long term health conditions. Following the implementation of electronic tablets for SSA in Skye & Lochalsh, it was intended to transfer the new practice to Gairloch/Aultbea, and Kinlochleven, and eventually out to other areas across Mid-Highland CHP.

SSA is a process endorsed by the Scottish Government to improve outcomes for those using community care services. It involves a joint resource and service management approach between partner agencies, health, social work and housing, to create a more person-centred approach to community care. In practice this involves either a community nurse, social worker or other professional assessing a client's needs using shared criteria and collecting information pertinent to all agencies involved in providing core resources to the client. The single assessment then can be shared across partner agencies resulting in quicker access to services for the client.

There are a number of key principles of SSA. Participation by service users and their carers is essential. Assessment must be appropriate to the individual's needs. This can mean simple, specialist, comprehensive, or self assessment. Simple assessment is most appropriate where needs or requests for services appear straightforward and can be resolved quite easily. It can involve one or more agencies. A comprehensive assessment is appropriate when a client appears to have a more complex and wider range of needs, and is likely to involve a holistic assessment of client needs and input by more than one agency. Specialist assessment is when in-depth assessment by a professional with recognised expertise is necessary. This may be used when the client needs are simple or complex. With self-assessment, the client identifies their own needs and potential solutions, possibly with the support of an advocate or professional help. Self-assessment may be carried out alongside other assessments and is often used if client needs are straightforward (Scottish Government, 2001).

Assessment should be undertaken by the most appropriate lead professional who must have the skills and qualifications to deal with the level of professional knowledge required. The assessor must obtain informed consent of the individual or their representative in order to allow sharing of appropriate information. The SSA assists the client to access all community care services. The results of the SSA must be accepted by other professionals and agencies (SMCI Associates, 2008).

Single shared assessment had been implemented on Skye and Lochalsh approximately six years previously, following a scoping exercise. Housing services had been excluded due to complex legislation around housing applications.

There were a number of concerns raised by stakeholders at the beginning of this study over the quality of SSA at that time. There was a need for shared criteria and protocols between agencies. It was not currently possible for all staff contributing to SSAs to be able to access all the SSA data because SSAs were not electronically available to agencies other than social work. The SSA was perceived as too generic and lacking in some of the specific data felt necessary by the professional teams administering it. There was no continuity of assessments for patients discharged from hospital in that previous assessments were not available to staff, resulting in the need to re-do the SSA from scratch. Finally, the SSA budget was completely controlled by the local authority (SCMI Associates, 2008).

The aim of the Mid Highland project was to use an electronic computer tablet to store client data electronically at the time of the assessment. The tablet is a small portable computer device that can be loaded with a proforma assessment form. The user writes on the screen which recognises handwriting and stores the information. The professional can take the tablet to the client's house, enter the information while making the assessment, then download it onto a computer database back at the office.

It was intended that electronic tablets would improve the quality of SSA and speed up access to resources for clients as assessments were being handwritten on paper, written up back at the office then sent (e.g. faxed) across to social work or other relevant agencies.

The use of electronic tablets had already been introduced into social work in Highland, including social work in Skye & Lochalsh, but not into other services doing SSA. Social workers in Skye & Lochalsh were not using the tablets. The non-use of tablets by social workers was stated by the project lead and social work team manager as due to lack of training in their use for new staff, and a loss of momentum in their use. However, it was not seen as a reason for not obtaining tablets for the use of health and housing staff who it was felt could benefit from using the tablets to improve the quality and efficiency of their work in identifying need and accessing appropriate resources for clients.

Three evaluations of the use of electronic tablets for SSA were identified early in the PATH project through an internet search and enquiries amongst colleagues as part of the project researcher role. All three papers were evaluations of pilots of the technology. The pilots were from Nairn, Mid Highland CHP (Mid Highland CHP, 2005), Hertfordshire (Dickenson et al, 2005) and South Yorkshire (Rogers & Smith, 2005).

The evaluations indicate that electronic SSA is seen as good practice in terms of overcoming issues such as difficulties in sharing information between the different agencies (once IT differences are resolved), improving the quality of information collected, and quicker access to resources. The only current alternative to electronic SSA is handwritten assessment which requires handwritten notes to be hand entered into databases or written up and emailed for database entry on return to the office, as opposed to downloading the completed electronic document onto computer or database.

Negative aspects mainly concerned issues around wireless connectivity when used out in the community (but not in hospitals), and lack of compatibility between IT systems used by healthcare and social work staff which hindered sharing SSAs. In addition, the evaluations highlighted the need for adequate training and support, particularly for staff not confident in IT skills.

The three evaluations of the use of electronic tablets indicated some difficulties in their use but the decision was still taken to implement them in Skye & Lochalsh and across to the other selected sites. Adaptation of their use was seen as a means of overcoming the difficulties experienced in other areas.

1.2.3 Defining the concept of good practice

While there is some evidence on the benefits of using electronic tablets for SSA, in general what is referred to as ‘good practice’ may not actually be based on specific evidence from practice. It may be used to refer to self determined ‘good practice’. What is seen as good practice by some may not be perceived as so by others.

The term ‘good practice’ or ‘best practice’ is commonly used in healthcare and other sectors. It can refer to a treatment, technology or mode of working. The terms ‘good practice’ and ‘best practice’ are commonly used across a range of sectors. They remain undefined in most of the literature and are often used interchangeably. The single definition of ‘good’ or ‘best

practice' found in the search of publications for the literature review in this study and in a general electronic search for a definition was *'a collection or bundle of routines that, based on past experiences of other organisations or units, are associated with a specific set of desirable outcomes that make them a target for transfer'* (Berta and Baker, 2004). Good practice in the healthcare sector is seen as practice that is based on evidence of what works best in a particular setting (evidence based practice).

Evidence based practice is a means of improving quality of treatment and care of individuals through the integration of individual clinical expertise and the best current evidence (Sackett et al, 1996 and Greenhalgh, 2001). In evidence based medicine the resulting knowledge can be used to make best judgements on the treatment and care of patients. In areas such as public health, this knowledge can be used to make best judgements on the practice to improve or sustain the health of a population.

A key means of implementing and sustaining best practice in the NHS is clinical audit. It follows a cycle working towards improving patient care and health outcomes. Clinical audit uses best practice as a means of measuring existing practice and then guides practitioners towards implementing changes necessary to achieve this (NICE, 2002).

However, best practice is only best practice if it is feasible. The fact that it has been agreed as the best way of working does not guarantee that every context has the means (eg resources, structure, attitudes) to implement it and to maintain improvements. Defining what makes good practice feasible to implement successfully can be difficult. Different settings and contexts may raise different issues in relation to transfer and best practice. Availability of and access to high quality evidence does not necessarily result in its implementation into practice. The process is complex. Likewise, the success of treatments and healthcare interventions in one area does not guarantee that when implemented into another area, these can be transferred directly and have identical success.

There is growing discussion and publication of literature around transferability of practice and the characteristics of partnerships and organisations that enable transfer. There is also recognition of the need to identify the elements that make an intervention work and whether these elements are transferable or simply relevant to a specific practice and its context.

This study seeks to provide a detailed example of the process leading up to the transfer of new practice from one area to another, identifying elements and attitudes that underpin the transfer. It is intended to provide an in depth study example for those involved in similar situations in the health service workplace and for those interested in the wider context of practice transfer.

1.2.4 PATH Project

This research was carried out within the work of the PATH project. Hosted by NHS Lothian in partnership with NHS Highland from March 2007 to March 2009 (extended to December 2009 for the Mid-Highland project), this was one of fourteen demonstration projects across Scotland commissioned by the Scottish Government as part of its Multiple and Complex Needs Initiative (MCNI).

The PATH project funded and supported three projects within each of three Community Health Partnerships (CHPs): Edinburgh, East Lothian and Mid Highland. Its overall aim was to '*explore how health, social care and voluntary sector partners in local Community Health Partnerships can work together to develop services responsive to a variety of users with multiple and complex needs*.' This research study was carried out within the Mid Highland CHP project.

1.2.5 Remote and rural issues in Mid Highland CHP

People living in remote and rural areas such as Mid-Highland CHP share some similarities in the pattern of diseases with those living in urban areas but, in general, people in remote and rural areas experience poorer healthcare services and health outcomes (Hudson, 2008). Remote and rural areas have higher rates of suicide, alcohol related disease and accidents (Loretto & Taylor, 2007). In addition, it is expected that over the next 20 to 30 years that the number of older people will increase while the number of adults of working age will decrease, as will the number of unpaid carers (Hudson, 2008).

However, areas classified as remote and rural can vary considerably in terms of needs, health issues and importance of the above mentioned issues (Hudson, 2008). This variation in local needs is apparent in sometimes contradictory evidence between sources. For this reason, the evidence collected in the PATH project rapid appraisal of Mid Highland CHP (White, 2007) is used as the primary source of evidence for local health and related social issues for those

with multiple and complex needs in this area, as opposed to evidence relating to remote and rural areas of Scotland in general.

Key issues in Mid Highland CHP in relation to health and related social issues for those with multiple and complex needs range from specific health problems to barriers raised by the remote and rural nature of the area. These include alcohol and alcohol abuse and its relationship to health and social problems (e.g. senile dementia in older people); a lack of available residential respite, difficulty in accessing respite care, and few nursing homes for people with dementia; and a home care service which although good, appears in short supply.

Barriers relating to rurality include a shortage of public transport which creates difficulties in accessing services for those who do not have their own transport; difficulties in keeping use of a service confidential in a small community (e.g. referral to a community psychiatric nurse); and seasonal changes in employment affecting health and wellbeing (White, 2007).

1.2.6 Target population for the Mid Highland project

The target population for the Mid Highland project was people with long term conditions aged over 65 years, people with alcohol problems and the homeless. The target population was chosen by senior management in Skye & Lochalsh and Mid Highland CHP. It was selected to address population groups particularly seen as vulnerable and as fitting the PATH project criteria.

1.2.6.1 Homeless

Mid Highland CHP is under increasing pressure for housing. Issues include rising house prices, second and holiday home ownership and incoming buyers, seasonal employment, and in-migration of those at or near retirement age.

The main health problems associated with homelessness in this area are alcohol or drug misuse; mental health difficulties; poor nutrition; respiratory disorders; depression; stress and anxiety; and poor dental health (SMCI Associates, 2008). Those groups most vulnerable to homelessness are single people; families; people with mental health issues; young people; and women who have experienced domestic abuse (NHS Highland, 2002; SMCI Associates, 2008).

1.2.6.2 Alcohol

Stakeholders consulted in the scoping exercise reported that there were many people in Skye and Lochalsh with alcohol problems, often hidden or not visible until other health issues emerge (SMCI Associates, 2008). Services for those with alcohol problems were perceived as good, in particular detoxification, although there was a need for services to address long term support after detoxification to control problem drinking, and to support carers of people with alcohol problems.

At the time of the study, the Skye and Lochalsh Drug and Alcohol Team included one Community Psychiatric Nurse (Addictions) providing community support, and one full time Alcohol Liaison Nurse providing support in hospitals.

1.2.6.3 Limiting long term conditions in the over 65s

The rapid appraisal identified a consensus within health, social care and housing stakeholders in Mid Highland CHP that the needs of individuals aged over 65 years with limiting long term conditions were a priority (White, 2007). The population is rapidly aging and the remote and rural nature of the area and related transport issues can increase difficulty in accessing services for this group. It was also noted that individuals within this group identified as in need of health and social care services may also fall into one of the above two categories.

The definition of limiting long term conditions used in the context of this project was *'those conditions requiring ongoing professional care, limiting functional capacity and likely to last longer than a year'* (White, 2007).

1.3 Researcher role

It is generally recognised that a researcher cannot be neutral. It is impossible for a researcher not to bring prior social and cultural knowledge to a research setting (Holliday, 2002; Flick, 2006). However, recognition of the difficulty of eliminating researcher influence or bias during research does not necessarily mean acceptance of the personal views of the researcher or that they are selecting evidence to support their own opinions. What is important is for the researcher to find ways to question everything that would normally go unquestioned in the setting. This is addressed in the report by making explicit the role and position of the researcher in the study; how data was collected; and how the evidence was interpreted.

The role as a researcher for the Mid-Highland project overlapped with the role as a researcher for this study. The responsibilities as the researcher for the Mid-Highland project involved identifying evidence of the use of electronic SSA and where possible, evaluations of its use elsewhere in the UK for the project management, and also responsibility for carrying out one of the three elements of the evaluation of the Mid-Highland project, namely the evaluation of the process of practice transfer. I attended PATH meetings and received or was copied into emails between the project lead and PATH management on issues relating to the wider project (such as the request and justification behind funding for the Staywell project). Involvement in discussions around the wider aspects of the Mid-Highland project helped give an insight into how and why it developed as it did. While this was valuable, I also needed to be aware of the potential for bias through overlap of my two research roles as my PATH role had a vested interest in the project's success and thus could influence the data analysis.

My MPhil role focused specifically on the plan to bring in electronic tablets to improve SSA and the plans for its subsequent transfer to other areas of Mid-Highland CHP. It did not involve the evaluation of other aspects of the PATH project although these are considered when they impacted into my study. My dual role was made clear to those people interviewed for the evaluation. The evaluation proposal was emailed to interviewees in advance of the interviews.

1.4 Overview of the dissertation

This chapter has provided background information on the setting for the study, including geographical location and population characteristics; how the practice to be transferred (electronic computer tablets) fitted into current local practice (single shared assessment); an explanation of good practice; an outline of the PATH project and target population of the Mid Highland CHP project; and description of my role as researcher.

Chapter 2 provides a literature review on practice transfer, organisational change and knowledge transfer. It first provides details of how papers were identified and selected. Next the review explores evidence on practice transfer from within the NHS and then, wider evidence across other sectors. The next part provides an explanation of the theoretical underpinning to the study and the reasons for selecting Rogers' theory of diffusion of

innovations for the analysis and assessment of evidence. The chapter concludes by summarising the areas where there is a need for more research and where it is hoped this study will contribute to providing more evidence.

Chapter 3 explains the research methods used in this study and why they were selected. It explains the development of materials; how the framework was used to assess and evaluate data and to design the interview schedules; the reasons for choosing a case study design; and selection of participants. It describes how the data was collected and analysed against the framework. The closing sections focus on ethical issues and potential limitations of the choice of study design and methods.

Chapter 4 presents the results from the data analysis. It begins by explaining how the illustrative quotations were selected. The results follow, each section arranged by key themes in organisational change theory: leadership; resources; authority structures; readiness for change; ownership; and organisational factors.

Chapter 5 discusses the implications of the results. The first part of the chapter focuses on the key themes reported in the results in the previous chapter, relating the findings to the evidence and theory identified in the literature review on practice transfer, knowledge transfer and organisational change. The next sections look at transfer and future plans, implications for public health, and finish with an evaluation of my study framework.

Chapter 6 updates the context around my study. The first section focuses on the strengths and weaknesses of the study. The next section looks at policy and management issues affecting Mid-Highland CHP. The third section then focuses on further evidence around practice transfer, discussing the remote and rural context, transfer of evidence into practice, technology in healthcare, and narrative in qualitative research. In the next section I discuss my reflections on the research experience. The final section concludes my study by noting how the study findings might be generalised to a wider context and whether the findings are consistent with existing evidence. I identify further areas for research. The chapter concludes that overall, the project demonstrated key elements of organisational change and knowledge transfer.

2 REVIEW OF THEORY AND LITERATURE

2.1 Aim of literature review

The aim of this literature review is to examine and appraise research on the transfer of practice in health and related agencies. The review will also examine related factors in organisational change and knowledge transfer. It presents the conceptual framework which led me to choose Rogers theory for the basis of data analysis and assessment.

This review is structured into three main parts. The first part of this chapter reviews the literature on transfer of practice. It begins by explaining the aim of the literature review; the criteria for selection of papers; definitions and terminology; and provides an explanation of organisational change and knowledge transfer. It reviews evidence on transfer of good practice within and between the NHS healthcare organisations, and is then followed by consideration of evidence on general findings in relation to organisational change and knowledge transfer. It finishes with a discussion of the limitations of the identified evidence. Appendices I and II give details of the search criteria and included papers.

The second part of this chapter describes the selection of Roger's theory of diffusion of innovations as a basis for the framework for data assessment and analysis over other potential theories. The main characteristics of Roger's theory are then outlined, noting how these relate to the research.

The third part concludes this chapter with a discussion of the evidence identified in the review. It discusses the gaps in research on practice transfer in the NHS and rural areas and then focuses on how evidence from the wider organisational and theoretical context might be generalised to the NHS. The section concludes by summarising the key points of the literature review. It states the intention to explore some of the gaps in the identified research on practice transfer in the NHS and summarises why Rogers' theory is appropriate.

2.2 Critical appraisal and review of literature

2.2.1 Selection of papers

Quantitative research studies are traditionally assessed according to a hierarchy of study design model, based on the perceived quality of the type of study design. This hierarchy considers systematic reviews and meta-analysis as the highest quality. Next are randomised controlled trials, cohort studies, case-control studies, cross-sectional surveys and case reports (subject to the methodological quality of the individual study) (Greenhalgh, 2001).

There are a number of key factors in assessing the quality of qualitative research which reflect its focus on meaning and context. These include a clear study aim, clear study findings, and recognition of strengths and weaknesses of the research including that of the theoretical framework that informed the study, and recognition of implications to wider practice. The study authors should explain the rationale behind the choice of subject, setting and methodology. Explanation of the methodology should explain the reasons for the sample and type of sample (e.g. purposive sampling); methods of data collection and analysis and why these are appropriate for the study. The results should demonstrate sufficient evidence to support the research findings and validity be established (e.g. through data triangulation). The researcher should demonstrate awareness and insight into the researcher role, potential bias, and ethical issues. Finally, the research findings must be clear and the authors should demonstrate awareness of their generalisability and implications in a wider context (HCPRDU, 2005; Flick, 2006; Seale, 2004).

In all, 15 studies were selected for inclusion (see Appendix I). Four studies were qualitative research (two primary and two secondary research) and nine studies combined quantitative and qualitative research. Two studies used quantitative research alone. Of the 11 studies which involved quantitative research, there were seven cohort studies; two case-control studies; one case study; and one systematic review. There were no randomised controlled trials.

Four opinion articles were selected for inclusion. While it is recognised that these are not research, they were included because they were summaries of evidence on organisational change or on specific aspects of knowledge transfer, and the authors are either co-authors of or cited within research studies included in this review. All three papers on organisational change were secondary research. Appendix II gives further details of all included studies including methodology and limitations.

2.2.2 Definitions and terminology

Despite the fact the terms ‘good’ or ‘best practice’ are commonly used across a range of sectors and work they remain undefined in most of the literature. As noted above, one definition is *‘a collection or bundle of routines that, based on past experiences of other organisations or units, are associated with a specific set of desirable outcomes that make them a target for transfer’* (Berta & Baker, 2004).

Organisational change is defined as *'involving beliefs, attitudes and intentions regarding the extent to which changes are needed and their perception of individual and organisational capacity to make these changes successfully'* (Backer, 1995 citing Armenakis et al, 1993). Organisational change and change management are used interchangeably in the review of organisational change literature by Iles & Sutherland (2001), the authors noting that the definition of change management differs in literature, thus making definition of boundaries for literature for review difficult.

Knowledge can be embedded in individuals, tasks, routines, technology and is integral to the transfer of new practice. There is no consensus in published literature on the definition of 'knowledge transfer'. Szulanski (2007) describes it as '*a process in which an organisation recreates and maintains a complex, causally ambiguous set of routines in a new setting.*' This is the definition used in this study. Szulanski (2007) also defines transfer as distinct from diffusion in that transfer focuses on movement of knowledge within an organisation as opposed to the gradual dissemination of knowledge.

Other definitions of knowledge transfer include the '*process through which one unit in an organisation is affected by the experience of another.'* (Argote et al (2005); and *'an event through which one organisation learns from the experience of another'*. (Darr & Kurtzberg, 2000).

'Transferability' is defined as *'the extent to which the measured effectiveness of an applicable intervention could be achieved in another setting'* (Wang, Moss & Hillier, 2005).

2.2.3 Organisational change and knowledge transfer

Organisational change is a process influenced by a complex interaction of internal and external factors. Individual and organisational beliefs and behaviour such as motivation, personality attributes of leaders and employees, resources, organisational environment and culture, can affect willingness to change and whether an individual or organisation is willing to take on new practice or technology (Barwick et al, 2005; Backer, David & Soucy, 1995; Iles & Sutherland).

Organisational change can be planned or emergent. Planned change occurs as a result of conscious reasoning and actions. Emergent change is change that appears to occur

spontaneously and was not planned. It may occur as a result of seemingly unrelated decisions, or through the effect of external factors such as the economy, politics or business competition, or internal elements such as knowledge distribution or uncertainty (Iles & Sutherland, 2001).

The process of knowledge transfer involves movement of knowledge from one area to another within or between organisation(s). It is an integral part of transfer of practice. Research on knowledge transfer tends to focus predominantly on product development, and increasing productivity and the competitiveness of an organisation through transfer of knowledge between units or between allied organisations. This leads to the question of the extent to which the results of such studies can be generalised into the context of knowledge transfer in the NHS. However, there are a number of shared issues for example: economical use of resources: interpersonal relationships and networks; and the process of learning new practice/skills. For effective transfer of knowledge the potential recipient needs to be aware of and have access to new knowledge, and to see evidence that adoption of the new knowledge or practice will benefit them without too much cost or a negative effect on other aspects of practice, such as evidence of its success elsewhere (Rogers, 2003; Backer, David & Soucy, 1995).

There is a lack of research around the factors that indicate the likelihood that a new practice will be adopted and be successful. However, there is awareness that potential for successful transfer of good practice involves the nature of the practice, the new context into which it is transferred and the characteristics of the individual or organisation adopting the practice (Barwick et al, 2005).

2.2.4 Outline of included articles

Table 2.2.4 below groups each of the included articles by theme and subject.

Table 2.2.4: Outline of included articles

Theme	Specific focus	Author
Transfer of good practice	Development and transfer of new practice (NHS)	Newell et al (2003)
Organisational change	Systematic review of effectiveness of strategies to address specific barriers to change in NHS health professional performance	Shaw et al (2005)
	Evidence on change management to provide a resource and reference tool for the NHS.	Iles & Sutherland (2001)
Knowledge transfer	Adaptation	Szulanski & Jensen (2006) Williams (2007)
	Roles, networks and social identities around the receivers and senders of knowledge	Darr & Kurtzberg (2000) Movery, Oxley & Silverman, (1996) Hansen (1999) Greunfield, Martorana & Fan (2000) Kane, Argote & Levine (2005)
	Competitive advantage	Argote & Ingram (2000)
	Difficulties in transfer	Szulanski (2007)
	Learning	Hinds, Patterson & Pfeffer (2001) Darr, Argote & Epple (1995)
	Geography and mobility	Almeida & Kogut (1999)
Opinion articles	Tacit knowledge	Nonaka (2000)
	Readiness for change	Backer (1995)
	Organisational change	Backer, David & Soucy (1995)

2.2.5 Transfer of new practice, organisational change and knowledge transfer in the NHS

2.2.5.1 Introduction

A literature search was carried out to identify papers that focused on knowledge transfer and/or practice transfer within or between organisations in the NHS, and in other sectors ranging from retail food franchises to international telecommunications. See Appendix I for details of the search criteria. Research on the transfer of new practice within or between NHS healthcare organisations was sought in order to examine and identify the factors that enable successful transfer of good practice. One study on a specific example of NHS practice transfer was identified.

The search for papers on organisational change uncovered a substantial body of literature covering theories, models and frameworks developed across a wide range of sectors, e.g. economics, business management, psychology and sociology. The decision was therefore taken to limit inclusion to literature reviews on organisational change in the NHS (Shaw et al, 2005; Iles and Sutherland, 2001) and to literature reviews focusing on the key factors on organisational change on which there is a consensus of opinion across the wide and complex body of evidence (Barwick et al, 2005; Backer, David, Soucy, 1995).

2.2.5.2 Practice transfer

The search for papers on practice transfer in the NHS identified only one paper on a specific case of transfer of good practice (Newell et al, 2003). No research that focused on practice transfer in a remote and rural NHS healthcare setting was found.

The single study focusing on the process of transfer of a new practice to a different setting within the NHS explored the process of knowledge generation and transfer through a detailed examination of a NHS project team's development and dissemination of an improved practice for the diagnosis and treatment of cataracts (Newell et al, 2003). The case study design enabled data to be collected throughout the process of developing the new practice in its natural setting. Given the limited number of people involved in the practice development group, qualitative research methods allowed the researchers to explore the development process including the changing perceptions of professional boundaries, and creation of a holistic view of the current practice which was not apparent before the project team began work (Newell et al, 2003).

The authors state that data triangulation showed a high level of consistency in evidence, although no details are given. This study was part of a larger study focusing on the development of best practice and transfer in five different UK industrial sectors which the authors state backed up these results. However, the results are not reported in this paper (Newell et al, 2003).

Other hospitals did not take up the opportunity to transfer the new practice despite its success. The reasons are stated but these appear to have been collected from the project team who developed the new practice, not directly from those hospitals and staff who declined the opportunity to adopt the new practice. It must be assumed therefore that these

reasons have not been explored in depth, although they do reflect key factors in organisational change.

The reasons included the perception that the new practice was too radical; restricted time to carry out the work involved in new practice transfer due to heavy staff workloads in the recipient hospital; lack of resources and a lack of relevant knowledge and skills to implement the new practice; the strong leadership and championing of the new practice by a consultant had been key to its original success and would therefore require similar championing in another setting; and the perception (whether true or not) that there was a different working environment in the hospital where the practice had been developed. This included the belief that it had been more receptive to the change required for the new practice (Newell et al, 2003).

The authors argue that transfer of the new practice failed because the development process had been integral to the success of the new practice in its original setting. The development process had resulted in a number of health professionals changing their working relationships and perceptions of what other professionals could do. Preconceived notions had been challenged and professional barriers broken down, thus creating a new context for the improved practice. To transfer the new practice successfully would require the transferral of the development process. In other hospitals practice was divided between interdependent health professionals who had not been through the knowledge and practice development stage and therefore had not experienced a shift in understanding and perception of what other professionals could do in a multi disciplinary work situation.

Newell et al (2003) contend that work practice comes from knowledge formed through social participation, working conditions, context and negotiated interpretations. Knowledge is context dependent. Generating knowledge about current practice is a precursor to changing that practice, especially if there is little understanding by those involved of a complex practice which depends on a number of health professionals working together.

There are a number of features of this case study which reflect organisational change theory. The first is the need for key individual(s) to champion change, in this instance, the health professionals participating in the development of the new practice. The second is the resistance to change from some staff when the new practice is implemented, the authors

giving an example of staff who did not want the new practice since they felt it removed responsibilities which they felt gave them increased status.

2.2.5.3 Organisational change and knowledge transfer

This section reviews literature on organisational change in the NHS, then moves on to review literature from a wider scope in relation to the key factors in organisational change and knowledge transfer.

Organisational change in the NHS*:*

Two papers were identified on organisational change within an NHS context: a review of evidence on change management as a resource and reference tool for NHS staff (Iles & Sutherland (2001); and a Cochrane systematic review to assess effectiveness of strategies to address specific identified barriers to change in health professional performance (Shaw et al, 2005).

Iles & Sutherland (2001) is a review of change management in the NHS which aims to provide a resource and reference tool. The review uses a multi-method approach including consultation with academics, management consultants and NHS managers; a systematic literature review of approaches, models and theories; peer review; and analysis of findings. The paper focuses on change at a strategic level, as opposed to a ground level such as illustrated by Newell et al (2003), but is useful in that it refers to organisational change within a NHS context.

Iles & Sutherland (2001) note the key elements of organisational change in the NHS as: quality and coherence of local policy; opinion leaders; co-operative inter-organisational networks; a supportive organisational culture; environmental pressure; clear goals and principles; good manager and clinician relations; and fit between change agenda and setting. These factors influence the different levels of success in healthcare organisations carrying out strategic change (Pettigrew et al, 1992 cited in Iles & Sutherland, 2001).

Iles and Sutherland (2001) note that achieving successful organisational change requires the ability to work with other organisations and stakeholders; with changing work pressures and technologies; in complex organisations with individuals whose work roles involve reliance on others; and with people who have previously experienced unexpected effects of change.

The authors note that NHS strategic change is unlikely to be linear or fixed, rather will tend to be emergent, however well planned. Staff using the new system or practice must benefit from it and be involved in the implementation process.

Reasons for resisting change may include: loss of control; a high level of uncertainty; surprise; confusion; loss of face; concerns about competence in new context; increased workload; change fatigue; view that costs outweigh benefits; past resentments; real threats (Kanter et al, 1992; Dawson, 1996 cited in Iles & Sutherland, 2001).

The second literature review on organisational change in the NHS was a Cochrane systematic review of assessment of strategies to address specific barriers to change in a health professional context (Shaw et al, 2005). Shaw et al (2005) reviewed 15 studies, both qualitative and quantitative research.

Shaw et al (2005) focuses on only one aspect of organisational change amongst health professionals but is still of value to this literature review due to its identification of barriers to strategic change in the NHS. Only one of the 15 studies included in the review described an intervention to address organisational barriers (the others focusing on interventions in areas including management and treatment of specific conditions, and prescribing behaviour). The authors concluded that there was insufficient evidence to say whether barriers were valid, which were most significant and whether they had been addressed by the specific interventions (Shaw et al, 2005).

The authors cite barriers to strategic change typically encountered in the NHS as including: information management; clinical uncertainty; competence and perceptions of liability; patient expectations; standards of practice; financial disincentives; administrative constraints (Cochrane Effective Practice and Organisation of Care Group cited in Shaw et al, 2005).

Some of these factors are found across research from other sectors (see below). Therefore, it may be assumed that although they refer to conditions of strategic service change as opposed to a small scale practice change, these factors may potentially be generalised to this study. However, the extent of generalisation may be affected by the contrast between the numbers of people involved in strategic change compared to ground level small scale change. The small number of individuals involved in minor scale practice transfer and change may lead to

the influence of specific individuals, barriers or enabling factors being far stronger than in large scale change.

General findings in relation to organisational change and related evidence on knowledge transfer

Both Iles & Sutherland (2001) and Shaw et al (2005) need to be read in context with other evidence on organisational change and knowledge transfer. There is a general consensus in the literature on this subject that the following factors are important to successful organisational change:

Readiness for change

An organisation must be ready and willing to accept change for organisational change to be successful. Motivation for readiness for change is determined by perceived need and pressure for change. This combined with individual personalities of management and staff (adaptability, capacity for professional growth, personal influence) influences implementation of a new practice. The organisation itself can have an environment receptive or unreceptive to change e.g. strategic aims, communication, openness to change, staff levels, resources, training (Backer, 1995; Backer, David & Soucy, 1995; Barwick et al, 1995).

The success of change and in particular sustaining the success of the new practice on a long term basis, requires commitment from those who will be using it and the belief that it will work and benefit them (Backer, David & Soucy, 1995; Barwick et al, 2005; Iles & Sutherland, 2001).

Barriers to change

Interventions to overcome barriers to the adoption of the new practice must be in place for change to be successful (Backer, David & Soucy, 1995). Although the need for interventions to overcome organisational and individual barriers to change is recognised, research on the effectiveness of tailored interventions to overcome barriers to change in health professional practice is lacking, with little evidence around identification and addressing barriers (Shaw et al, 2005).

Lack of motivation in either the recipient or source of the new practice can impede transfer. Recipients must have the ability to move on from old practices in order take on new, an ability which includes capacity to take in and use new knowledge (Szulanski, 2007). Szulanski (2007) found that the relative importance of predictors of difficulties changed through the different stages of transfer. The study tested a model to identify difficulties in transfer using a survey of companies on their experience of successful transfer. Szulanski found that the motivation of those involved in a transfer is significant throughout the transfer, but that a motivated recipient also has the potential to increase difficulty during implementation of the transfer, due to a recipient's potential to dismiss help and/or adapt the practice in a way which makes transfer more complex or is unnecessary. However, it should be noted that this study used retrospective accounts of transfer and the companies, all interested and aware enough about transfer to provide data to the study, only provided reports of successful not attempted transfer (Szulanski, 2007).

Opinion leader:

A leader who champions the proposed new practice or change is of key importance in its success and sustained success (Newell et al, 2003; Pettigrew et al, 1992 cited in Iles & Sutherland, 2001; Barwick et al 2005). A leader must convince potential recipients of the need for change. This may involve creating an image of the change that is attractive to organisation members and convincing them that it will improve their working conditions hat is to say, make their job easier or less stressful. Involvement of employees (or recipients of change) in the process must be taken seriously and managed well. Not to do so can lead to low morale and wasted time and resources (Backer, 1995; Barwick et al, 2005).

Ideally a leader or champion must be highly respected and committed to the change. There needs to be clear and open communication from leadership. The opinion leader must be perceived by recipients of the new practice as trustworthy, credible and as having the appropriate expertise (Backer, 1995; Barwick et al, 2005). Opinion leaders can come from within the organisation or be external appointments e.g. consultants (Backer, David & Soucy, 1995). Backer (1995) states that opinion leaders from an organisation's middle level are usually most accepted by recipients. However, opinion leaders who are senior within an organisation may be able to ensure adequate resources such as time and funding.

Newell et al (2003) cite the strong leadership and championing by a consultant of developing an improved practice for the diagnosis and treatment of cataracts as a key factor its success

in its original NHS hospital setting in the Midlands, and one that the hospitals considering implementing the new practice saw as necessary to replicate.

Ownership

The people who will be implementing and using the new practice should be involved in the planning for implementation. This will help build internal support and reduce resistance (Backer, David & Soucy, 1995).

The new practice should engage the learner. Recipients who feel that they lack the appropriate skills or who are not happy with the change may become resistant to its implementation. Specialist training may be necessary for who will be using the new technology or practice. This can be seen as linked to ownership through involvement in the implementation process (Baker, David & Soucy, 1995; Iles & Sutherland, 2001).

Adaptation and replication

Adaptation and replication are used simultaneously in knowledge transfer yet are seen as distinct mechanisms. A practice may need to be adapted to fit its new context successfully, whether to fit individual aspects of the new context or to create a sense of ownership in the individual or organisation receiving the innovation and thus contribute towards readiness for change. Complex and causally ambiguous practice and knowledge often requires adaptation (Williams, 2007).

Two studies were identified which focused on adaptation and replication in knowledge transfer. Williams (2007) tests a theoretical model on international knowledge transfer relationships among telecommunications services. The study found that adaption and replication exist separately, are used simultaneously, and both contribute to transfer. The results also indicate that organisations are more likely to replicate a practice when the knowledge and practice to be transferred is ambiguous and must be copied exactly. Adaptation of knowledge and practice is more likely when the knowledge is context dependent and, therefore, must be modified for the new setting (Williams, 2007). However, the study used data from a survey with a 19% response rate which is low even when the use of data from additional archival measures is considered. Other limitations of this study include its context of international telecommunications firms and thus, how far the results can be related to a NHS setting.

A study by Szulanski & Jensen (2006) found that replication but not adaptation (presumptive adaptation) was beneficial to transfer of practice. The study looks at how adaptation affects the growth of a new practice. The authors describe two types of adaptation, the first (presumptive adaptation) is when a practice is modified to its new setting and is adapted and institutionalised without referring to a working example. The second is where adaptation of a new practice is gradual and cautious, maintaining the integral value of the original practice. Presumptive adaptation is defined for the purpose of the study as when an adaptation involves two or more simultaneous adaptations which are significant enough to leave the original practice of little diagnostic value.

The authors tested two theories, one that presumptive adaptation will improve performance in the new practice setting, and the second that it will decrease performance in the new practice setting. A descriptive case study methodology was used to follow the transfer and adaptation of a mail box franchise from the USA to Israel. Real time data was collected using qualitative research methods. The study found that presumptive adaptation led to failure in growth of the new franchises. Following this failure, there was a return to replication of practice which was successful (Szulanski & Jensen, 2006).

The limits of this study arise from its context of practice transfer between international business franchises and whether this can be generalised to the NHS. The authors note specific local characteristics in relation to business and the potential affect of this on the franchises success. A key example was the tendency of franchisees to withhold royalty payments in order to use the money to expand their stores. The authors do report a larger study which reflected similar results in transfer of this franchise to other countries, however, details and results of this study are not given. The study does not answer the question of how far practice can be adapted before its value is lost.

Resources

Resources are necessary for transferring and sustaining a new practice. These include staff, office space, technology, training, equipment and financial support and commitment. Awareness that appropriate resources will be available is a key factor in contributing to readiness for change in recipients, likewise that the new practice will not lead to excessive costs (Backer, David & Soucy, 1995).

Newell et al (2003) report that two of the reasons given by hospitals to explain reluctance to transfer in new practice were lack of the necessary resources and expertise to facilitate the knowledge generation process, and lack of time due to workloads to make the necessary changes to existing practice (see 2.2.5.2).

Communication

Face to face contact as opposed to dissemination through materials and media such as memoranda, journals or conferences benefits knowledge transfer (Backer, David & Soucy, 1995; Barwick et al, 2005). Knowledge sharing may be restricted for inter-personal reasons or due to a lack of understanding as to why a practice is effective (Argote et al, 2000). Knowledge may be tacit as opposed to explicit and therefore difficult to articulate (Nonaka, 2000). Explicit knowledge is formal, systematic and easily communicated to others. Tacit knowledge, however, is personal, difficult to formalise and communicate. It is a combination of information technical skills, personal beliefs and perspectives. The holder of tacit knowledge may not recognise the value of this knowledge or be able to convey it (Nonaka, 1991).

Tacit knowledge is perceived as having a significant impact on accuracy and success of knowledge transfer. Tacit as well as explicit knowledge can also be transferred when people move to a new environment and adapt their knowledge to the new situation (Argote & Ingram, 2000). Tacit knowledge is more easily transferred when learning and the transfer of best practice occurs through direct contact, for example, social networking and face to face transfer, as opposed to through observation and arms length imitation of knowledge related actions from another organisation. Direct contact gives the opportunity to transfer less visible actions which are outcomes of tacit knowledge thus resulting in less mistakes and difficulties during transfer.

Language used to explain and transfer the new practice should be easily understood by potential recipients (Backer, David & Soucy, 1995). Clarity will help not only with the comprehension of the new practice but will also enable the recipient to explore issues such as its potential for success in their system. While it could be assumed that experts are better than novices at transferring knowledge to beginners in practice, the organisation of knowledge and level of abstraction may result in novices finding their instructions difficult to absorb. A study focusing on expert and novice instruction of beginners in electronics, and the participant's resulting ability to complete an electronic circuit, found that individuals

receiving knowledge from experts may be more able to transfer knowledge to corresponding tasks, than those receiving knowledge from beginners. However, there is also evidence that complex instruction from experts could prove more difficult for beginners to absorb than basic instruction (Hinds, Patterson & Pfeffer, 2001).

When knowledge is transferred between units within an organisation there is evidence that weak ties, that is to say weak communication links and relationships, speed up projects when knowledge is not complex, is independent and well documented, but slow transfer down when the knowledge is complex, less independent and less codified. Transfer of complex knowledge requires a strong tie between two units to transfer successfully as more complex knowledge is less likely to be documented and will require the source to take the time to articulate the knowledge (Hansen, 1999).

Strategic alliances and competitiveness

The advantages of strong links between source and recipient during transfer are also explored in studies which focus on strategic alliances and organisational competitiveness. Evidence indicates that organisations that transfer knowledge successfully between units or franchises or who form strategic alliances with other organisations, are more productive and competitive against other organisations (Argote & Ingram, 2000). However, this is not straightforward. Tacit knowledge is difficult to transfer internally and difficult for external organisations to access. Argote & Ingram (2000) note that although effective knowledge transfer can be achieved by embedding explicit and codified knowledge in technology, this is also a means by which it can be accessed by competitors.

There is evidence as to how organisations can become more competitive by embedding knowledge in interactions involving people. Interactions between people, tools and tasks are the most likely not to fit a new context when transferred, thus if knowledge is contained in interactions, it is more difficult to transfer externally to competitors (Argote & Ingram, 2000). Evidence of this is found in Newell (2003) where the interaction which forms a new way of working is a major factor in success of new practice and major factor in failure to transfer.

Movery, Oxley & Silverman (1996) examine knowledge transfer between firms which are strategically allied by analysing changes in the extent to which the technical resources of firms overlap as a result of an alliance. Change is measured by analysis of citation patterns

of patent portfolios. This involved taking a sample from a patents database of bilateral alliances involving at least one US firm between 1985 and 1986.

Results found that firms in joint equity alliances (where partner organisations share ownership of a separately incorporated organisation) as opposed to contract based alliances appeared more effective in the transfer of complex knowledge. The study also gives some support to the argument that experience in related technological areas is important in determining the absorptive capacity of a firm, in that the results indicated that an organisation's ability to absorb knowledge from its alliance partner depends on the pre-alliance relationship between the organisations' patent portfolios (Movery, Oxley & Silverman, 1996).

Planning and strategies

Planning and strategies are required to overcome the complexities of implementing new practice successfully (Argote et al, 2000). Strategies may be aimed at an organisational or system level, and/or employee or individual level. A plan should include identification of potential difficulties during implementation and propose methods for overcoming them (Backer, David & Soucy, 1995; Barwick et al, 2005).

Similarities between contexts and partners

The context from which a practice is transferred and the context into which it is transferred can impact on the success of the transfer for reasons that include similarity, communication routes and formal and informal links.

A study by Darr & Kurtzberg (2000) focusing on knowledge transfer across a pizza delivery franchise in England found that although results did not show that managers made a conscious decision to choose a strategically similar transfer partner, results indicated that managers were aware of different strategies, and given the choice, looked to knowledge transfer partners with similar strategies to themselves when the potential for knowledge transfer arose. The authors explored three specific dimensions on partner similarity relating to knowledge transfer to see which would lead to greater transfer of experience: greater business strategy similarity, greater customer similarity or greater partner proximity. Knowledge transfer occurred most often between firms who shared similar strategies and problems (Darr & Kurtzberg, 2000). However, there are limitations relating to generalising these results to the NHS. The study focused on a single technology (pizza making) and the

two distinct strategies which emerged were cost consciousness (i.e. profit consciousness) and business expansion, neither directly relevant to NHS.

There is some evidence that individuals are more at ease in sharing knowledge with those with whom they have a similar social identity (Kane, Argote & Levine, 2005). This study which examined the effect of social identity and knowledge quality on knowledge transfer across groups found evidence that members of a group are more influential and persuasive than someone who is new to a group, or has moved out and then returned. The study used an experimental context where 144 students were split between four social identity contexts, each context with 12 three-person groups. Each group made an origami product and midway through the task, a member from each group rotated into a different group. Researchers created different group identities by recognised techniques. The groups were either two three-person work groups within one six-person group (superordinate identity) or two three-person work groups (no superordinate identity). Knowledge quality was manipulated by training some groups in a superior routine.

Results indicated that groups were more likely to take on the routine of individuals rotating into their group when they shared a superordinate identity than when they did not, and were more likely to adopt the production routine of a rotator when it was superior to theirs. Groups who did not share a superordinate identity with the rotator generally did not adopt the rotator's routine even when it would have improved their performance (Kane, Argote & Levine, 2005). It was not evident however, whether transfer of routine occurred due the group's receptiveness or the rotator's motivation. There is also the question of the extent to which the results can be generalised due to the experimental context.

A study by Gruenfeld, Martorana & Fan (2000) backed up this theory that a shared social identify will benefit transfer. It found that group members are more likely to learn new things from the experience of other group members than from outsiders. A longitudinal study of 29 work groups investigating the effects of temporary membership changes for migrant and indigenous members of groups focused on whether the unique knowledge and experience of roving members could be transferred from the original group to another doing the same pursuits. Data was collected through individual and group essays on process and performance in a range of tasks, and was then deconstructed into distinct ideas. Ideas from individual essays were compared with group essays to identify whose ideas were in the group essays. Results indicated that all members produced unique ideas after the migrant

member returned to the original group more than at any time earlier. However the ideas of the roving member were less likely to be used in the group essay (Gruenfeld, Martorana & Fan, 2000). Limits include the artificial conditions of the study; random allocation of migrant members instead of selection on basis of expertise; lack of control group; and the possibility that time and attendance at lectures influenced results rather than membership change.

Learning

In a mixed methods study of pizza store franchises in the US, Darr, Argote & Epple (1995) found that knowledge gained by learning by doing transferred across to stores owned by the same franchisee, but not to those owned by different franchisees. Factors relevant to the success of the transfer were identified as individual employee characteristics including skills and length of service, organisational characteristics and the nature of demand for the product. The results also showed a rapid depreciation of knowledge. This was perceived by the authors to be the result of high employee turnover which may limit the relevance of this evidence to sectors with a similar high employee turnover (Darr, Argote & Epple, 1995).

Geography and location

The distance between organisations can affect transfer of practice and knowledge. Knowledge localisation may occur in specific geographical regions due to its transfer via the employment of skilled individuals who move between organisations (Almeida & Kogut, 1999). Almeida & Kogut report on the movement of knowledge through the interfirm movement of skilled individuals in the semiconductor industry in California's Silicon Valley. While this area may be considered unique in its concentration of an industry within a certain region, leading to questions over generalisation of the results outside the study, it does indicate how employees can transfer knowledge to another unit or employer.

Institutionalisation of change

Change needs to be embedded into the everyday routine and culture of an organisation for it to last. Elements that encourage this include modifying the organisational structure and procedures, pilot projects, feedback, and involvement of employees in learning by doing (Barwick et al, 2005; Iles & Sutherland, 2001).

2.2.5.4 Discussion

In summary, there is limited evidence on the transfer of good practice in the NHS, in particular remote and rural healthcare. Evidence on practice and knowledge transfer in other sectors is greater and supports specific themes in transfer such as adaptation and partner similarity. However the wide range of settings and contexts covered restricts the extent to which results can be generalised not just to the NHS but even across sectors such as telecommunication organisations, experimental contexts, and pizza franchises. The evidence does gain in value when it is considered across the context of organisational change.

The evidence on practice transfer in an NHS setting (Newell et al, 2003) is in a hospital and urban context as opposed to primary and community care in a remote and rural area, as with this study. The study is set in the context of healthcare, social care, and housing partnership working. These agencies can be seen as having a shared purpose in terms of helping clients, but are separate organisations.

Secondary research on organisational change in the NHS is predominately at a high level which impacts across an organisation as opposed to a unit within. There is a lack of research around the infrastructure for good practice transfer when the organisation is small or is managed by a single person. Organisational environment and structure (e.g. culture, management style, and individual attitudes) are key factors in organisational change, and elements of change will be affected by the size of the organisation (Rogers, 2003).

There is a question of how far evidence from outside the NHS can be transferred and implemented within the NHS given its diversity of stakeholders, complex ownership and resourcing, and the professional independence of many staff. These three elements in particular distinguish the NHS from other large organisations and franchises. Added to this are a number of complex and diverse features eg needs and expectations of client groups; local priorities; and different socialisation processes of professions (Pollitt, 1993 and Dawson, 1999 cited in Iles & Sutherland, 2001).

There is evidence from the manufacturing sector that indicates top management involvement is fundamental to successful change (Iles & Sutherland, 2001). However, the NHS has key opinion leaders within NHS professions who may not consider themselves to be management or fit traditional, management roles. There are attitudes and a hierarchy distinct

to the NHS unusual in other organisational structures. Newell et al (2003) shows how traditional work patterns and professional perceptions of what other professions are capable of taking responsibility for may need to be broken down in order for new practice to be developed.

The majority of evidence is from sectors involved in product development and competitive advantage, often involving franchises or organisations that are strategically allied, or examining group and social dynamics in knowledge transfer in an experimental setting. Neither product development nor competitive advantage relate directly to a NHS context while the extent to which research carried out in experimental as opposed to natural settings can be related to the NHS is limited. In addition, a number of the studies are set outside the UK.

It could be argued that it may be possible to generalise evidence on similarities between contexts and partners to hospitals and trusts which share the context and identity of the NHS. Evidence indicates that individuals share knowledge more easily with those with a shared social identity such as membership of a group (Kane, Argote & Levine, 2005; Gruenfeld, Martorana & Fan, 2000).

It is in the wider context where there is a general consensus of key factors for organisational change that evidence may be more easily related to research on transfer of new practice in a remote and rural area, even though the organisation in this instance consists of a small number of people from different agencies working in partnership. The key elements such as the need for leadership, adaptation, resources, ownership by the recipient, and training can be related to change in a NHS environment, as can the reasons why people may resist change. These key elements reflect some aspects of Rogers' diffusion of innovations theory. Section 2.3 below outlines the reasons for the selection of Rogers' over other theories for the theoretical framework underpinning this study.

2.3 Selection of theoretical framework

There are a wide range of theories and frameworks relating to transfer of practice and associated areas. The reasons for selecting Rogers' theory of diffusion of innovations as a basis for the framework for data assessment and analysis are explained below followed by an outline of Rogers' theory of diffusion of innovations.

Five theories on transfer of practice were identified in the literature review (see 2.3 onwards). All five theories had potential for use as a basis for a framework for assessing and analysing the data from the study. These were: a conceptual framework for transferring research into practice (Simpson, 2002); a model for assessing organisational readiness for change (Lehman et al, 2002); a conceptual model for considering the determinants of diffusion, dissemination and implementation of innovation in health service delivery and organisations (Greenhalgh et al, 2004); Checkland's soft systems methodology (Checkland, 1981); and Rogers' theory of the diffusion of innovations (Rogers, 2003).

All the above had potential for use, however, the decision was taken that Lehman's model, while covering organisational change, did not provide the best means of assessing the transfer process and nor did Simpson's framework with its focus on the transfer of research, rather than existing practice, into practice. While Greenhalgh's framework was for use in a healthcare setting, it was based very closely on Rogers' theory.

The main challenger to the choice of Rogers' theory was Checkland's soft systems methodology (Checkland, 1981). This theory offered the advantage of providing a framework for applying different models to a real life organisational situation. Checkland's theory could be used to identify first the expected transfer process and then how the actual process interacts with this. It would analyse the transfer process taking into account social and cultural, as well as technological, considerations. Checkland's model would have provided an equally good framework as Rogers'. However, it was felt there was potentially less ability to focus in depth on the transfer process with this model, compared with Rogers' theory.

Rogers' theory was chosen because it provides a well established structure for identifying and analysing the stages in diffusion, transfer and implementation of a new practice. This structure includes factors such as the decision making process, readiness for change, leadership, ownership and adaption of new technology. Its focus is the introduction of a new technology of innovative practice and the process by which it is transferred into the new context and sustained (whether successfully or unsuccessfully). There are also elements of this theory that overlap with theories around organisational change (discussed in the literature review in section 2.2.5) which provide a structure for analysing the wider issues around readiness for change and ownership of a new practice or technology by potential users.

2.4 Rogers' theory of diffusion of innovations

Diffusion is the process by which an innovation is communicated in a certain way over time among members of a social system. Rogers' defines a social system as a 'set of interrelated units involved in joint problem solving to accomplish a common goal'. These interrelated units may be organisations, informal groups or individuals, and the arrangement of these units form the system's structure. Aspects of the social structure such as established behaviour norms and individual leaders who informally influence the attitudes of other individuals can help or hinder diffusion within the system. An innovation may be an object, idea or practice. It does not have to be new, just perceived as new by the individual or system which may adopt it (Rogers, 2003).

Five main characteristics of innovations:

Rogers states that there are five main characteristics of innovations that explain the rate of adoption. The first is its relative advantage, i.e. is it perceived as better to some extent than existing innovation and practice? Will it improve the single shared assessment process?

The second characteristic concerns the compatibility of the new innovation with the new context. This is the extent to which it is seen as consistent with the values, past experiences and needs of those adopting it. This is a key issue with regard to this study. Although adaptation of the transferred practice is likely and expected it is still necessary for new practice to fit into the general context of NHS healthcare, rural area, and available resources.

The third characteristic is the complexity of the innovation or new practice and how easy or difficult it is to understand or use it. In light of the short timescales for the project, a relatively simple practice was chosen. Training in how to use the tablet and a degree of practice would be required in order for users to become confident in its use and for their handwriting to be recognised.

The ability to pilot the new innovation on a small scale is the fourth characteristic (trialability). The transfer of practice was to be piloted first in Skye & Lochalsh with the intention to transfer the practice on to other areas within the Mid-Highland CHP.

The fifth characteristic concerns the extent to which the results of an innovation are easy to see by others as more visible results are more easily adopted. An innovation which is seen to

be used by others with little difficulty becomes more attractive to a potential adoptee. The theory also perceives that change and innovation are taken on more quickly when they fit with processes and views already held by an organisation and are seen to have more advantages than current practice. This overlaps with organisational change theory which refers to the need for ownership, ie potential users of a new practice to feel that they have a stake in the new practice and that it will benefit them. These perceptions were explored in interviews.

Adaptation:

Evidence has demonstrated that an innovation diffuses faster and is more likely to be sustainable when it can be re-invented to fit the new context.

Knowledge transfer:

The essence of diffusion is communication exchange; how the information is exchanged between the one who holds the information and the one who does not have experience or knowledge of it, who is the receiver of the new practice or innovation.

Time:

Time is a key dimension in the diffusion-innovation process. The timescale of the Mid-Highland project set time restrictions on the transfer of practice, but due to a number of factors timescales had to be extended, letting the nature of the diffusion process set its own limits and rate of adoption.

Stages of adaptation:

Rogers' theory of diffusion of innovations sets out five stages that an individual will pass through when deciding to adopt evidence of an intervention. These are knowledge, the point of becoming aware of an intervention; persuasion, becoming positive about the intervention; the decision to adopt it; its implementation; and confirmation, the continuation, adaptation or cease of use of the intervention.

Rate of adoption:

Rogers' categorizes those who adopt innovations according to the rate of adoption (e.g. innovators, early adopters) but this is less relevant to this study due to the fact that these categories refer to those who have the option of whether or not to adopt a new practice. The Mid Highland project approaches adoption of new practice from the perspective of looking

around for possibilities and selecting the most suitable (although there was existing knowledge of the new practice prior to the project). Rogers' theory measures the rate of adoption using an S-shaped curve. The S-shaped curve reflects the distribution of the number of individuals adopting an innovation when the cumulative frequency of this is plotted over time. At first only a small number of individuals adopt an innovation, then this speeds up and the curve becomes steeper until the rate of adoption levels out due to most individuals within the social system having taken on the innovation. This S-shaped curve is seen in the rate of adoption of most innovations although the rate itself varies. This is less applicable in relation to this study due to the fact that the study focuses on only one instance of organisational adoption as opposed to adoption by numerous similar groups within a system.

Diffusion boundary:

The social system is perceived by Rogers as setting a boundary for the diffusion. The pattern of the units of a system creates a structure for human behaviour. This structure can be formal or informal (e.g. interpersonal networks). This study focuses on a system with a formal structure consisting of healthcare, social care, and housing staff working in partnership. Rogers notes that the structure of a social system can assist or alternatively impede diffusion.

Kinlochleven and Gairloch/Aultbea, the two areas selected for practice transfer following its implementation in Skye & Lochalsh were part of the wider social system of health, social care and housing staff in Mid-Highland although there were differences in the number of staff and availability of specific professions.

Opinion leaders:

Opinion leaders and change agents are individuals who try to influence an individual to adopt an innovation. The role of project lead was key to this study.

Types of innovation adoption decisions:

There are three types of decisions (to adopt or reject) an innovation. The first is made by an individual (optional); the second by consensus by system members (collective); and the third by a few individuals within a system with the power or to do position to do so (authority). An authority decision was taken in this study.

Consequences of diffusion of innovations:

Rogers also notes three types of consequences of an innovation: desirable versus undesirable; direct versus indirect; and anticipated versus unanticipated.

2.5 Conclusion

There is a lack of research on practice transfer in the NHS and specifically in remote and rural areas. Other gaps in existing research include identification of the elements that lead to successful knowledge and practice transfer and how this might be affected by different settings, contexts and organisational structures. This research study explores identification of key elements involved in the process of transfer, with the intention of building on the findings of Newell et al (2003) and analysing the findings, drawing on themes from organisational change and knowledge transfer.

Despite the setting in secondary care in an urban setting (as opposed to the study's setting of primary care in a rural setting), the single study on practice transfer in the NHS is the most relevant to the research findings (Newell et al, 2003). Key evidence on organisational change is provided by Iles & Sutherland (2001); Backer, David & Soucy (1995); and Backer (1995). These key elements include the needs for leadership, adaptation, readiness for change, resources, and ownership by recipients.

Rogers' theory was identified as appropriate for use as the basis of the framework for data assessment and analysis because it provided a structure relating to organisational change that the stages of practice transfer could be checked against. The lack of evidence on the application of Rogers' theory in rural NHS settings indicates that this study is also an opportunity to explore its use and effectiveness in assessing practice transfer in this context.

3 RESEARCH METHODS

This chapter gives details of the research methods and explains the reasons behind the study design.

The first part sets out a chronological outline of events of the Mid-Highland CHP project. It also indicates where this study begins and ends in relation to the stages of the project. The second section details the methodology, noting PATH project timetable changes, and issues around access and the researcher role. The next part discusses the framework: its structure; how it was used to evaluate data; and its effectiveness in practice. The chapter then explains the reasons for choosing a case study design, participant selection, the development and identification of materials, data collection and analysis methods, and issues around ethics.

3.1 Background

3.1.1 Mid Highland CHP and Mid Highland project

A description of the characteristics of Mid-Highland CHP is provided in Chapter 1, along with an explanation of SSA and of the target population group for the project.

3.1.2 Chronological outline of events

The Skye & Lochalsh part of the Mid Highland project was initiated in early 2008 with the understanding that the chosen new practice (unidentified at this point) would not only be transferred into Skye & Lochalsh by the end of 2008 but would also have been rolled out to other selected areas in Mid-Highland CHP. However, it became apparent early that transfer was unlikely to be completed within the timescales for both the project and the study. Methods were developed that allowed the documentation of the key factors in the process leading up to transfer of practice into Skye & Lochalsh and the initial stages of transfer to Kinlochleven and Gairloch/Aultbea.

Figure 2 gives a brief chronological outline of events to provide a structure for the discussion on the pre-transfer process and slow progress of the project. It also shows how the work on this study fits into the overall project timescale.

Figure 2: Chronological outline of events of the Mid-Highland CHP Project

Date	Progress	MPhil
Apr 07	PATH project begins	
Sept 07	Rapid appraisal Mid Highland CHP	MPhil begins
Jan 08	Skye & Lochalsh identified as pilot area	Design of theoretical framework for use in analysis of practice transfer.
Mar 08	1st project deadline (extended to Dec 08)	Study design and methodology drawn up.
Jul 08	Scoping exercise	
Jul 08	Introduction and transfer of electronic tablets identified as focus of project	Interview schedule designed and piloted.
Sept 08	Electronic tablets ordered	Literature review begun (ongoing throughout project)
Oct 08		Phase 1 interviews
Nov 08	Ssa practitioners group set up	Data coded.
Dec 08	2nd project deadline (extended to Dec 09)	Interview schedule amended in light of project development
Mar 09	Ssa group begin re-launch	
Apr 09		Phase 2 interviews
Aug – Oct 09	Ssa training workshops	Data coded
Aug 09	Laptops, not electronic tablets arrive	
Jul 09	Transfer to Gairloch/Aultbea and Kinlochleven begins	Interview schedule amended in light of project development
Nov 09		Phase 3 interviews
Dec 09	Final project deadline	Data coded Data analysed
Spring 10	Further ssa training	Writing up
Spring 10	Practice transfer to Gairloch/Aultbea and Kinlochleven continues	
Spring 10	Ssa audit ongoing	

3.2 Location

The study was predominantly carried out in Skye and Lochalsh but its last stage involved Kinlochleven and Gairloch/Aultbea.

3.3 Timetable

The research was carried out from May 2008 to 31 December 2009. This timescale reflects the timetable of the PATH project which was scheduled to be completed by December 2008. The Mid-Highland project was given a further extension until March 2009 which required it to be underway by the end December 2008 and, if not completed by 31 March 2009, to have a definite future plan by that date. The final evaluation and impact assessment of the project was carried out in December 2009 at which time transfer of practice to the new areas was in its initial stages.

3.4 Access

The project and its subjects were accessed through the role as the public health researcher on the PATH project. The role of the public health researcher included working with colleagues in the evaluation of the Skye & Lochalsh pilot project for PATH. It is recognised that the closeness of the researcher to the study raises issues regarding researcher bias but it also allowed access to the development of the project (see section 1.3).

3.5 Phenomenological and grounded theory

Elements of both phenomenological and grounded theory approaches underpin the research methods. The phenomenological approach focuses on human experiences. In this study this relates to the way people perceive and experience the transfer of an example of good practice into a new setting (Denscombe, 2007; Neuman, 1997). The aim of this research to provide a description of issues that demonstrate how the key stakeholders experience a situation. Grounded theory was used to explore themes that emerged during data collection and analysis (Glaser & Strauss, 1967).

3.6 Framework for assessment and evaluation of evidence

Existing models and frameworks based on the theory of diffusion of innovations are all related to the analysis of data from complex innovations and/or multi or large organisations. This was borne in mind when designing a framework for data analysis that would be pertinent to transfer of a simple innovation into a small system, such as Skye & Lochalsh.

The system as such in Skye & Lochalsh involved a number of agencies working both alongside each other and in partnership on specific issues such as SSA.

Rogers' theory of diffusion of innovations (Rogers, 2003) was used as a framework for analysing the data in this study. The reason why it was selected over other theories is outlined in Section 2.3. The framework provided a checklist of elements characterising the active process of diffusion of a new practice or innovation. Data was organised and assessed against the framework stages. The framework stages were: pre-implementation; organisational issues; readiness for change; the transfer/implementation process; and post-implementation. Each stage was broken down into key elements necessary, according to the theory, for each innovation to diffuse successfully. See Appendix IV for the full framework.

Evidence was organised within the framework at each collection phase. This allowed for evaluation of potential gaps in evidence and the framework itself. Assessing the study's evidence against the key points of each stage of diffusion meant that the potential success of transfer could be monitored and the weaknesses and strengths of the project's progress identified. The evidence was then organised into the main themes of organisational change.

In the analysis of data against the framework, there was an evidence gap at the initial stage where the potential adopter becomes aware of a new technology or becomes aware of the need for a new technology to improve practice. This was not applicable to the study because the decision to transfer a new practice and the choice of practice had been made by senior management in response to the introduction of the PATH project, not to a perceived need for or awareness of the technology itself.

The assessment framework had three significant gaps where it did not pick up on key themes. Despite the inclusion in Roger's theory of the rate of adoption of a new practice, this had not been included in the framework which meant it missed the fact that the project set its own pace and did not follow the schedule set by the overall PATH project. The second gap concerned shift in project focus from electronic SSA to SSA itself in response to concern from some frontline staff and team leads over the need for resolving problems with SSA prior to transferring in electronic SSA, and in response to the enthusiasm from those who used SSA and valued its capabilities. The third gap involved the inability of high level management to resolve the difficulties over a shared electronic record of SSA accessible to all staff involved in SSA.

3.7 Design

A case study design was chosen to focus in detail on how best practice is transferred in a specific project. The advantage of this type of study is that its in-depth nature can reveal how various aspects of relationships and processes interact and can contribute to a wider body of literature. It can reveal issues not necessarily evident from a different and broader approach in this instance, in the transfer of evidence into practice. A disadvantage is that it may be difficult at times to generalise from the findings of case studies due to its focus on one specific setting.

3.7.1 Methods

The study used qualitative research to assess why and how an example of good practice was successfully transferred to another area: semi-structured interviews, document review and a researcher field diary. Qualitative research methods were chosen as the best means of exploring the decisions, perceptions and attitudes of those involved in the transfer process. The small number of people involved in the study would have restricted quantitative analysis.

3.7.2 Participants

A total of 12 key stakeholders in the implementation and management of the transfer of electronic tablets in the Mid Highland CHP project were selected for interview. These were Project Co-ordinator, Locality Manager, Community Nurse Team Leads, Social Work Team Manager, Allied Health Professionals Co-ordinator, Community Psychiatric Nurse Team Lead, Housing Managers, Occupational Therapist, Public Health Practitioner/Public Health Nurse. The sample included individuals responsible for choosing electronic tablets as the specific project to be carried out within PATH in Mid-Highland, and team leaders responsible for communicating the benefits of the tablets to potential users and ensuring they were properly trained in their use.

Potential users were not included because the aim of the evaluation was to examine the process of transfer, rather than evaluate how the electronic tablets worked in practice. It focused on the decision to choose the specific practice for transfer, and decisions taken on how and why it might be adapted when transferred into new areas. Research questions focused on identification of the key elements affecting the plans for transfer and actions leading up to transfer. Not why, or why not, the potential users liked using them.

3.7.3 Development of materials

Materials for data collection and post hoc analysis of results were developed in the first year of the study. These were the framework of practice transmission for assessment and evaluation of how evidence is transferred (see section 3.6); interview schedules to gather detailed information on the understanding and thoughts of those responsible for the implementation of the intervention in Mid Highland (see Appendix III); and a protocol for data analysis.

Documents were identified for review included the project plan, minutes and action notes of meetings, scoping exercise report (SMCI Associates, 2008), rapid appraisal report (White, 2007), impact assessment report (SMCI Associates, 2009), and partnership working report (White, 2009).

Framework: As discussed in sections 2.4 and 3.6. The framework was based on Rogers' theory of diffusion of innovations and outlined the stages of practice transmission and provided a structure for the assessment and evaluation of this example of practice transfer (see Appendix IV for the full framework).

In-depth semi structured interviews: The use of in-depth semi-structured interviews enabled the development of themes through detailed discussion of the attitudes and the experiences of the interviewee. The interview structure was developed using the framework as a basis for the timing of the interviews in relation to the stages of the project, and in developing the interview schedules. The questions were designed to ensure data was gathered for each stage and factor within the framework. It enabled exploration of interviewees' perceptions, understanding and decisions around the process leading to transfer of good practice. This form of interviewing allows for flexibility in the questions asked of the participant so that emerging themes can be investigated and specific issues discussed in greater depth than would be feasible in a more structured interview. The content of the interview schedules for both Phases 1 and 2 is attached in Appendix III. Some of the questions were developed for specific agencies and, therefore, were not put to all interviewees.

The interview questions were piloted in July 2008 in East Lothian CHP. Revisions were made to the pilot interview questions to ensure that issues such as communication and changes in plan were captured. In addition to the data collected in the interviews, general

documentation was reviewed and related against the framework. This allowed for triangulation of data, verifying the findings from the interviews and emerging themes. The documentation contributed towards the development of the interview schedules.

Following coding and categorisation, data from the interviews was examined against the framework. The emerging themes were first measured against the diffusion of innovations framework and then categorised against organisational change theory. The interview schedules were adapted again to reflect the results from the previous set of interviews and events and changes in the project itself.

Protocol for data analysis: the protocol for data analysis set out the process for analysing, evaluating and verifying data. This process was as follows: interview transcripts were cross-referenced with field notes and other material for context, then re-read for implied meanings and gaps in evidence. Data was coded and the codes categorised under key headings. Themes and relationships among categories were identified and concepts developed leading to general concepts. This process involved prioritisation of parts of data, the grouping and merging of themes, and the development of a hierarchy of codes and categories, and a move towards key concepts. Conclusions were reviewed with alternative theories of explanations. Emerging explanations were checked against data throughout the process. Data was verified through triangulation with different data sources (see also Section 3.7.5 Data Analysis).

Rapid appraisal report: The rapid appraisal report was produced prior to this study as part of the PATH project. It reported on a series of interviews initially with CHP management in order to identify examples of good practice in services for people with multiple and complex needs in Mid Highland. Following identification of such services, selected interviews were carried out with service managers to try to identify the elements that contributed to their success (White, 2007).

Report on scoping exercise: A scoping exercise was carried out by an external consultant following the rapid appraisal, on the request of the Skye & Lochalsh project management. The scoping exercise looked at the issues in Skye & Lochalsh in accessing services for older people, people with alcohol problems, and people with problems with housing. The findings informed the development of practice in Mid-Highland CHP as part of the PATH Project (SMCI Associates, 2008).

Impact assessment framework and report (SMCI Associates, 2009): The impact assessment framework was drawn up by two external consultants and the researcher as part of the role in the overall PATH project team. Its aim was to measure the impact of the Mid Highland project and it formed one of three strands of evaluation, the other two being the partnership working report and the evaluation of practice transfer. The impact assessment framework was sent to the project lead for completion in partnership with key stakeholders in Skye & Lochalsh in September 2009.

Partnership working report (White, 2009): the partnership working questionnaire was first distributed to key stakeholders in Skye & Lochalsh in August 2008 and followed up with a half day workshop to allow for examination of material from the completed questionnaires and to devise an action plan for partnership working. The questionnaire was distributed again in September 2009 to detect changes in partnership working that had occurred in the past year (White, 2009).

Researcher diary:

A diary detailing events, observations and thoughts was kept during the study as a means of charting its development and exploration of ideas.

Project documentation:

General documentation from the Mid-Highland project was studied in order to verify evidence from the interviews. The project documentation consisted of minutes and action notes of meetings (the majority from the Skye & Lochalsh single shared assessment practitioners group), project proposals, action plans, partnership working and impact assessment reports, and emails. Data from these documents was analysed and compared to the interview data. This data was found to be difficult to analyse in the same depth as data from the interviews due to the secondary nature of the minutes, action notes and project plans. Therefore, it was used mainly to corroborate the themes arising from the analysis of interview data and to document project intentions and actions. The project action plans and minutes predominantly depicted the decisions and actions behind the process while data from emails helped to add detail to the thinking and the influences behind some of the decisions. The partnership working and impact assessment reports also allowed triangulation of data (SMCI Associates, 2009; White, 2009). Information and observations from the researcher diary were used to corroborate evidence and help explore the themes arising from the interviews.

Table 3.7.4 states the methods of data collection, the dates and the number of interviews and documents reviewed.

3.7.4 Data collection methods

Table 3.7.4: Data collection method and details of interviews

Method of data collection	Timing	Details
Phase 1 semi structured interviews	October 2008	5 face to face interviews 2 telephone interviews
Phase 2 semi structured interviews	April/May 2009	7 telephone interviews
Phase 3 semi structured interviews	Nov/Dec 2009	9 telephone interviews
Document review	March 2008 onwards	7 project plans 3 action plans 3 progress reports/reports 5 action notes Skye & Lochalsh SSA practitioners group 8 miscellaneous documents eg SSA practitioner group remit; minutes of meetings; papers explaining SSA process 15 emails Staywell proposal Researcher field diary Rapid appraisal report Scoping exercise report Partnership working report Impact assessment report

The aim of the Phase 1 interviews was to obtain baseline data against the framework in order to identify the attitudes, perceptions and understanding of the project held by the key stakeholders. The face to face interviews were conducted over two days in Skye. Face to face interviews with study participants are acknowledged as preferable in encouraging openness and a rapport with individuals. However, time and resources restricted the capacity of the researcher to do all interviews face to face. As a result, two participants who the researcher had met on a prior occasion were interviewed in Phase 1 by telephone. The remaining five interviews were conducted face to face in Skye & Lochalsh. All interviewees gave permission for the interviews to be recorded. The Phase I interviews were held approximately five months after the decision to transfer in electronic tablets for SSA. This was prior to the initiation of the practitioner group to work on improvement of SSA.

The Phase 2 interviews were held in April/May 2009 at six months following the Phase I interviews. The aim of the Phase 2 interviews was to uncover reasons for the slow progress

of the project as well as examine and compare attitudes and perceptions with the data from Phase 1. All were telephone interviews.

The Phase 3 interviews were held in November and early December 2009. The aim was to collect evidence for the final evaluation of the project which was due to conclude at the end of 2009. This evidence was gathered for comparison with the baseline and interim evidence and to explore and assess the extent to which transfer had occurred and the extent to which the overall work of the project had impacted on practice in Skye & Lochalsh. All nine interviews were by telephone. Two new stakeholders in the Skye & Lochalsh part of the project were interviewed in place of two of the previously interviewed stakeholders. This change was made to reflect changes in involvement and responsibilities relating to the project. In addition, two new stakeholders, one from Gairloch/Aultbea, and the other from Kinlochleven, were interviewed to gather evidence on the transfer of practice.

All but one of the interviews in this phase were recorded. One interviewee declined the request for a recorded interview (Phase 3) but was happy for notes to be taken. Interviews took between 20 to 40 minutes, the longer interviews being with those more heavily involved in the PATH project. Transcription took about four to seven hours per interview depending on its length. The researcher carried out and transcribed all the interviews. All were in English.

3.7.5 Data analysis

Phase 1: An interim analysis of data from the Phase 1 interviews was carried out to examine the selection and plans for implementation of the transfer of the new practice, focusing on attitudes and actions. Data was analysed for comparison with data collected in the second and third sets of interviews and from documentary sources.

The protocol for data analysis was followed (see section 3.7.3). The interview transcripts were transcribed and each allocated a numerical code. No names were transcribed. Transcripts were cross-referenced with field notes and other material for context then re-read for implied meanings and unexpected gaps in evidence. A grounded theory approach was taken to explore emerging theories and concepts during analysis of data. This approach was selected so as to enable me to take a step back from my role as the researcher for the PATH project. As the project researcher, I had access to meetings, emails, documents and discussions which were a source of information as to how the project was progressing and

why. While useful in identifying emerging themes in the transfer process, I wanted to distance myself in the early stages of the analysis from my knowledge of the wider project for a more independent piece of work.

Data from all interviews in Phase I was coded. The initial nodes emerging from this coding included ‘support’ ‘involvement’ ‘selection’ ‘pressure’ ‘bottom of pile’ ‘backfill’ ‘stress’. These were grouped under ‘involvement’, ‘priority’ and ‘time’ and eventually under the organisational change theme ‘leadership’. Codes were compared between interviews to identify similarities or relationships, and then categorised. This was repeated after each interview phase, codes and categories being examined for links. Data sub-categories were grouped into larger categories according to related issues as themes developed. Emerging themes were established against organisational change theory. These themes were then categorised and interpreted against the analytical framework derived from diffusion of innovations theory.

Data was coded and categorised using the QSR N6 qualitative analysis programme. QSR N6 is a version of the NUD*ST software for qualitative data analysis (QSR International Pty Ltd, 2002). It was selected for use as it is a software package which enables the user to manage data and ideas in a project. It involves a toolkit based on coding text documents such as interview transcripts, document review, and analysing and exploring coding (Richards, 2002).

I used my researcher diary for reflection during analysis in order to verify the emerging categories and themes and to help distinguish between elements of the transfer process that had been suggested by others involved in the project and those emerging from my analysis and thoughts. I had discussed my thoughts and reflections in the diary on a regular basis throughout the study, in particular following project meetings in Skye and at the time of the interviews in order to capture my observations of relationships and wider issues that might not be captured in the interviews. For example, I explored my thoughts about what might lie behind decisions taken by the project lead such as policy and pressures from higher management level. My observations from project meetings provided a source of data on interaction and nuances in attitudes between stakeholders on project issues. Being a participant at project meetings also helped give me a sense of organisational and policy pressures impacting on the time available for the project and thus its direction.

The interim analysis data from Phase 1 also was used to adjust the questions for the Phase 2 interviews in order to explore some of the emerging issues.

Phase 2: Phase 2 interviews were held following the work of the SSA practitioner group, and at the time the training sessions for users of SSA and electronic tablets were being set up. This was the stage where it would be expected the transfer of practice would follow. The aim of the Phase 2 interviews was to explore attitudes and actions of those involved in the project at that stage in the transfer of new practice, following up on themes that arose in the first set of interviews, and exploring new themes and perceptions prior to transfer. Again, I transcribed the taped interviews and allocated each transcript a number for identification. Data analysis was carried out using the same methods as Phase 1.

Phase 3: Phase 3 interviews collected evidence for a final evaluation of the project, following up again on the themes that had emerged in the earlier interviews, comparing the data to that gathered in the previous stages, and assessing the impact and success of the project. The taped interviews were transcribed as before and each transcript allocated a number. Data analysis was completed using the same methods in the previous phases. Again the themes were grouped against theory of organisational change then measured against the framework.

Data was collected from all interviews. No interviewees dropped out or stopped their interviews. One participant was reluctant to be recorded and notes were taken instead. All participants answered the questions freely and openly. A visit was made to Skye & Lochalsh in October 2008 for the first set of interviews, carrying out five of the seven interviews face to face. It was not possible to carry out two of the interviews at this time due to the limits of time and geography. These were carried out by telephone the following week.

The Phase 2 interviews were all carried out by telephone as time and funding restricted visiting the study location for each set of interviews. Skye & Lochalsh was also visited for a partnership working workshop in September 2008, a PATH project meeting in May 2008, and for a final PATH project meeting in December 2009. These additional meetings provided the opportunity to collect documental evidence e.g. minutes and project plans, and to observe interaction between some of the project members.

Interview timetables for each phase were planned so as to ensure that interviews were held as close together as possible to minimise the chance of the project dynamics changing during the interview phase. In both Phase 2 and Phase 3 interviews there was a gap of one to two weeks between one interview and the rest.

3.8 Ethical issues

Advice was sought from the North of Scotland Research Ethics Committee (NSREC) as to whether NHS ethical approval was required for this study. The NSREC stated that ethnical approval was not necessary. Research participants were fully informed of the aims of the study. Verbal consent was sought to tape the interviews and tapes were destroyed after transcription. Transcripts were kept in a secure manner. Every effort was made to ensure confidentiality and anonymity wherever possible.

3.9 Discussion

The original methodology for the study was adapted as a result of the sliding timescales with the addition of a third interview phase instead of two, as initially planned. The slipping timescales made the project more interesting to analyse as it moved away from some aspects of theory of diffusion and change, yet moved closer to others. Evidence from the interviews at three stages of the project helped to identify the process of shift in the focus of the project from e-SSA to improving the quality of SSA itself in response to what stakeholders wanted.

It became apparent during the study that the framework developed for assessment of data against diffusion of innovation theory was not able to measure time. Structured to measure the stages of diffusion and the different aspects and actions that occur in each stage, it did not take into account the speed of decisions and actions. However, it was possible to gather evidence here by reviewing action plans, minutes of the Skye & Lochalsh SSA practitioners' group, and emails. Nor did it include the impact of the inability of high level management to resolve the issue of IT incompatibility. This difficulty was acknowledged at the start of the project, the project being designed to improve the situation. However, this proved not to be quite straightforward in practice. Gaps in the framework are discussed in section 5.10.

The semi-structured interviews enabled exploration of interviewees' attitudes and perceptions around the new practice and provided some rich data. It is recognised that the sample of people interviewed is small but the number of key stakeholders is small. Interestingly the issue of confidentiality did not seem to worry the interviewees even when

expressing opinions in opposition to the project plans, a number stating that their views were well known to everyone.

The study design enabled elements to emerge which reflected a common experience in the implementation of practice into a new setting, specifically within the context of NHS healthcare and partner agencies in a remote and rural area. This contributed to overcoming the limits to which the results can be generalised due to its case study setting in a remote and rural area with a small population.

3.10 Conclusion

This chapter has provided details of the research methods and design in readiness for the next two chapters which present the results and then discuss these in relation to existing evidence and theories. It explained the development of materials used for collecting study data; it detailed how the framework was used as a basis for analysis of evidence; how the interview phases were structured and implemented; and how the data was analysed and verified.

4 RESULTS

4.1 Introduction

This chapter presents the results from the data analysis. These findings are organised under the key themes in organisational change theory: leadership; resources; authority structures; readiness for change; ownership; and organisational factors, in order to identify the factors which enable or hinder the process of transfer.

In setting out the findings, quotations were selected that best illustrated the themes identified. Where possible quotes were chosen that reflected the range of views across the themes, balanced with ensuring that quotes from one or two individuals did not dominate. The list of people selected for interview was adapted slightly at Phase 3 to reflect changes in individuals' involvement in the project (three participants dropped and four new participants added) which is reflected in the number of quotes from individual participants. The study results are presented below.

4.2 Leadership

A senior NHS manager in Skye & Lochalsh was identified as the project lead at the time the decision was taken by senior management in Mid-Highland CHP to participate in the PATH project. The project lead took on this work in addition to their other management responsibilities. There was general agreement that heavy workloads impacted on the ability of the project lead to drive the work.

> *"It's it's like everything. You know it's always on top of what you're doing. It's not as if you're doing it instead of something else. And that's that's often the cause of a bit of resistance."*
>
> *Interviewee 7, Phase 1*

> *"..the ongoing sort of huge workload that everybody has. I know I know [project lead] is the main driver as as far as this area is concerned and I know she's been completely engulfed in all kinds of things."*
>
> *Interviewee 4, Phase 1*

Workloads also affected the ability of other stakeholders to give time to the project. Three participants stated that the impact of heavy workloads were partly due to changes underway in health and social care in Skye & Lochalsh and Mid Highland CHP and nationally. PATH was not the highest priority:

> *"…because everybody's got their other jobs to do and they can't have lots and lots of meetings."*
>
> *Interviewee 4, Phase 1*

"…it's not had any dedicated staff time. You know it's everybody doing it as another add-on to their working life. So I do think it's suffered that it hasn't had a stratified lead.""

Interviewee 6, Phase 1

"…change that has been taking place anyway I think maybe has been unprecedented, certainly for bodies like us who are now dealing with a new funding regime um and all all issues around that."

Interviewee 3, Phase 1

However, no action was taken to recruit a dedicated project lead. The project lead highlighted the lack of workforce capacity due to the remote and rural nature of the area and its small population.

"I think it's [the delay] to do with the fact that we don't have a huge amount of people who can um…..step in and do your job at short notice and things you know."

There is an indication that the lack of recruitment of an individual with sole responsibility to lead on the project may have been due to the work demanding more time than expected. Two participants reported:

"It has been a lot more work for me than expected. And I do feel, and maybe that's maybe this is obviously a perception isn't it, but I do feel I've taken the brunt of the work."

Interviewee 1, Phase 2

"I think it needs a identified lead. With dedicated time. I think I think that that is the main issue and I think if somebody had had this as a job then they would have sat down and they would have thought things through much more. But as I said the pressure on all of us is to carry on with our full time jobs plus doing the PATH project."

Interviewee 6, Phase 2

The need for an individual with time to work on the project was illustrated in November 2008 when an external consultant was brought in to set up a small group of key practitioners (the Skye & Lochalsh SSA practitioners group) to resolve difficulties with SSA, therefore temporarily taking on some of the leadership responsibility. At the time very little work had been done on the project since its initial stages. This changed as the SSA practitioners group began work to resolve the difficulties with SSA and plan its relaunch so as to get to the stage that electronic tablets could be implemented. This was received positively by both members of the group and others. The project lead stated in Phase 2:

"..it's been of a great help because honestly if we hadn't had S coming in it wouldn't have gone anywhere because I could not have done it. I just didn't have the capacity to do that at all. "

Another participant stated when asked how people viewed the SSA practitioner group:

"Positive. People are enthusiastic."

Interviewee 5, Phase 2

In April 2009 the public health practitioner took on the role of leading on the relaunch of SSA. This responsibility was assumed on top of their current workload. The project lead retained responsibility overall for the project and led on the implementation of Staywell, a health self-management tool. The generic self management and COPD (chronic obstructive pulmonary disease) Staywell models were proposed for piloting in Mid Highland CHP as an additional means of improving the health of the PATH target group. However, the same problem of lack of time affecting the main project also affected the introduction of Staywell. Staywell was not yet up and running in December 2009 due to difficulties in engaging GPs and lack of time available for the project lead to drive this work. Work was underway to identify a means of overcoming these difficulties.

The project lead and public health practitioner both took responsibility for the transfer of practice to Kinlochleven and Gairloch/Aultbea, the project lead making the initial approach and presentation, and the public health practitioner being the main contact for the transfer of practice and associated materials, general advice and support. One of the team leads in the practice transfer areas commented:

"…was really good and has helped me no end really and um sort of sent me a lot of the information and things that they had developed um and then came um to meet with us."

The two team leads in the new areas, while enthusiastic about electronic single shared assessment, experienced similar difficulties to the Mid Highland project lead in terms of time and workload.

"It's just because we obviously haven't been given any extra time or anything to actually to participate in the project. So it's just another piece of work. Which is difficult and sometimes it's nice to be asked you know, 'Do you have the capacity to do this?"

"So it would be nice to have somebody, a dedicated person who was leading for the area um who maybe was independent from the team and who um could take it forward."

At the start of the project the project lead had been slow to communicate the aims to team leads and frontline users in Skye & Lochalsh. The project proposal was discussed informally with some management colleagues but there was no consultation involving all team leads for frontline staff and the staff themselves.

"…because you know the time pressures that we have around this have not helped. It's meant you know, we've had to make some decisions without you know, perhaps a full consultation of the group, and how does everybody feel about this."

Interviewee 1, Phase 1

"Well I know I was very cynical back in October, but I think had I been a wee bit more aware of everything that was going on, I might have you know been a bit more enthusiastic. But I think it was a case of 'this is happening' and [I] didn't know anything really about it. So I think it's maybe just being included a bit more from the beginning.."

Interviewee 5, Phase 2

"The criticism I hear is that it was presented as a decision that was already made and this was what was going to happen and that was that."

Interviewee 4, Phase 1

"..and decisions have already been taken, for example about purchasing technology, I mean you are probably going to hear that's been a bit of an issue."

Interviewee 3, Phase 1

"…but I think if I had been a wee bit more aware of everything that was going on, I might have you know been a bit more enthusiastic."

Interviewee 1, Phase 1

A participant commented that they foresaw some conflict with project management when the electronic tablets were introduced.

"It's not as if we're not going to co-operate but we're not going to be that deeply involved…That's the way it'll be I'm afraid. Now whether that's you know our fault or or whether there was enough consultation at the beginning I don't know um you know."

Interviewee 4, Phase 1

Slow communication of the project to Kinlochleven and Gairloch/Aultbea was also noted.

"I was a bit concerned that we hadn't known we were going to be part of the roll out, it might of, to to kind of find out on as we were going into it rather than you know maybe earlier on in the PATH project. Um which would have, you know we would have been able to follow the progress of the other areas as they developed.

Interviewee 8, Phase 3

"Because we don't really have much of an idea what the whole PATH project is about. We've never really been given that sort of brief as it were. Apart from what is expected of us you know in terms of this area."

Interviewee 9, Phase 3

All those interviewed noted either the heavy workloads or the lack of time which hampered ability to lead the project.

4.3 Resources

Funding for the project was sufficient and was not the cause of the project delay. However, slack resources were not available. Slack resources are the uncommitted resources (e.g. staff for backfill) available to an organisation (Rogers, 2003). Larger organisations tend to have more slack resources than smaller organisations. The key example of slack resources for this study was the inability to provide a full time project lead despite there being money available to fund a dedicated post.

"I just think it will be about the freeing up time for staff and supporting them to do it. That is the biggest thing because time is such an issue for everybody, and paperwork is such an issue for everybody whether it is electronic or not."

Interviewee 6, Phase 1

"…it's a remote and rural area, it's difficult getting access to locums sometimes.."

Interviewee 2, Phase 1

This was also expressed by a team lead in one of the two transfer areas.

"I mean it's it's time's the big one. Um and sort of backfill to provide a member of staff to actually ….take this on board for a couple of hours a week or something, to actually take it forward cos otherwise it just kind of gets left and um it doesn't we don't move forward."

Interviewee 9, Phase 3

The technical resource required for the project was the electronic tablets. The project lead took the decision to purchase twelve, six to be shared across the health and social care teams in Skye & Lochalsh, and three for Gairloch/Aultbea and three for Kinlochleven. However, some participants thought that sharing the tablets may result in the tablets not being available when needed by users.

"So I actually think…if you had one between two or three people, ….. because they'll be coming in and out at different times, so that that would actually make it work. Whereas if you have one that you're queuing to get, then it's not going to work. But it's a start."

Interviewee 6, Phase 1

The distance between office and client (due to the nature of a small population in a comparatively large geographical area) might potentially impact on the availability of electronic tablets as these are to be shared between staff.

> *"It's about getting enough tablets to go round and expecting people to go and do uh a 30 mile round trip to pick up a tablet and um maybe then go out and then go back again to download the information.."*
>
> *Interviewee 4, Phase 1*

When the electronic tablets eventually arrived they were laptops without handwriting recognition. There had been a delay in the order and delivery of electronic tablets, reported as due to difficulty in sourcing a tablet with handwriting recognition application and general delay from the e-health department in Mid-Highland CHP who had taken the decision to order laptops not tablets without informing the project lead. The delivery of laptops not electronic tablets meant information could not be handwritten onto the tablet. It would have to be typed. Stakeholders had different views as to whether this would actually make a difference (these views generally reflecting whether an individual thought they would have used the e-tablet in practice).

> *"It's it's it's really been awful actually um because we'd, a lot of my team are not computer skilled. They they can do a bit of the basics but it's quite daunting and we thought well if you can handwrite it it will be fine, it shouldn't be a problem. But what we have is a word document basically."*
>
> *Interviewee 9, Phase 3*

> *"I doubt that people will type on them other than one or two members of staff. Um one. I don't think they will do it in somebody's house. I certainly wouldn't cos I don't type."*
>
> *Interviewee 8, Phase 3*

> *"Not happy. It defeats the whole purpose."*
>
> *Interviewee 5, Phase 3*

> *"I don't know what practical difference it would make with regard to completing the SSA."*
>
> *Interviewee 4, Phase 3*

> *"Which is unfortunate really cos what we wanted, we wanted tablets with handwriting recognition and that's what was ordered but that's not what came."*
>
> *Interviewee 10, Phase 3*

> *"I don't think it makes any difference."*
>
> *Interviewee 6, Phase 3*

Time was another slack resource in short supply. In addition to the lack of time for the project lead to give to its implementation and transfer, four participants commented on the impact of the lack of time on enthusiasm in some quarters for the project.

> *"…and you know people are pretty change fatigued at the moment and I think you know it's seen as yet another thing coming on board that you know we have to do or we have to be involved in and you know, 'Oh is this going to go anywhere? Is this just going to be another waste of energy and then it all dies a death? So it's it's not that people are being awkward or deliberately unsupportive or whatever it's just people are very very busy."*
>
> *Interviewee 1, Phase 1*

> *"It's only time really….would impact on us. If we were filling them in. I think if we were expected to fill them in it would be impacting on our service in our time we would have to set aside for to do them."*
>
> *Interviewee 2, Phase 1*

Time was necessary for training relevant staff in the relaunch of SSA and would have been necessary for training on the electronic tablets. Time will also be necessary for staff to become confident in using the SSA form on the laptop. Doubts were expressed by one participant about how this would go in light of the current use of a Word version of the SSA document which has proved time consuming for staff who cannot type.

> *"If if you're somebody like me who's used to using computers and and kind of adapting documents it's fine but if you kind of go in and you know the boxes all get big and sometimes the girls who are not so familiar can't can't adapt that and they find that it just makes life a lot more difficult."*
>
> *Interviewee 8, Phase 3*

The intention was to bring in two practical resources to support the project: CareFirst licences and crib sheets. The initial plan for the project was to focus on the information collection using the electronic tablets, and not address the problem of the incompatibility of the health and social work databases as this was seen as unachievable within the project timescales. However, the project lead with support from management, took the decision to purchase licences for CareFirst (the IT system used for electronic SSA by social workers) for non social work staff. These licences would enable them to access and upload electronic SSA directly onto the CareFirst database, as opposed to downloading the SSA from the tablet and emailing it to social work who lack time to upload it to their system.

> *"..and if nurses can transfer [the SSA] to us and we can electronically transfer back to them, it will be much easier and if we can get CareFirst licenses for well, it would be lovely for all staff. Then they can access all sorts of information."*

Interviewee 6, Phase 2

However as of December 2009, the Carefirst licences had not actually been purchased. It was reported that a request was under consideration by the e-health department for Mid-Highland CHP. There were mixed opinions on whether the Carefirst licences would ever be used or be of any use with the laptops. These ranged from the assumption that the approval for the licenses would never arrive to the fact they would be of no use with the laptops.

> *"I think the difficulty is the accessing the Carefirst system so that people can put the information on but not change information…..And I think that's the biggest hurdle I think from my understanding of it."*
>
> *Interviewee 10, Phase 3*

> *"I think the benefits are great and the cost implications are minimal."*
>
> *Interviewee 6, Phase 3*

Cribsheets used by East Lothian for SSA were adapted for use as a guidance resource for SSA in Skye & Lochalsh. The cribsheets were a reference tool summarising the key issues and information to be collected for each profession, to guide staff from other agencies and sectors when collecting cross-agency information. These had originally been drawn up by representatives from each of the relevant agencies and sectors in East Lothian, and were now adapted with the input of the relevant professions in Skye & Lochalsh to create an accurate and helpful reference tool and checklist for their colleagues.

> *"I've only seen the rough ones and I think they're a very good idea. Um it may well be that the staff who aren't very sure where to direct the SSA, they will have a better understanding of other professionals' roles."*
>
> *Interviewee 5, Phase 2*

> *"So the crib sheet was useful um because I was able to make that very clear and also obviously to to tell people what the kind of information was that we would need, but also to speak to us beforehand really."*
>
> *Interviewee 4, Phase 3*

There was positive feedback to the cribsheets from participants in the SSA relaunch training. The cribsheets were also welcomed as a useful resource in Kinlochleven, and Gairloch/Aultbea, although adaptation would be required.

> *"..it does focus you on what the information is you need to tease out at the assessment if you know um the areas that they need the information about."*
>
> *Interviewee 9, Phase 3*

> *" ..some of it would need tweaked because we don't have all the services.."*

Interviewee 9, Phase 3

> *"That's something that's been very um popular here [Skye & Lochalsh] and certainly people do use them so um they [Kinlochleven and Gairloch/Aultbea] thought it was a good idea…"*
>
> *Interviewee 10, Phase 3*

Evidence on the need for slack resources, e.g. backfill and the lack of time for those involved in various aspects of the project, overlaps with that on leadership. Time and the ability to backfill posts was not mentioned by all participants but all commented on the effect of a small number of staff across sectors on working practice.

4.4 Authority structures

The new practice identified for transfer was required to fit the PATH project's criteria, timescale and funding limitations. The decisions to participate in the PATH project and to transfer in electronic single shared assessment as the specific Mid-Highland CHP project were both authoritative decisions taken by higher level management.

> *"Initially we had quite a large meeting back in, earlier in the year. I think it must have been about January/February where we called in a lot of the public health and [senior manager]…and various key people um and clinical director to discuss to discuss the the project detail."*
>
> *Interviewee 7, Phase 1*

> *"And that was agreed at that larger meeting at the beginning of the year and then following on from that there were a number of smaller sessions involving [PATH Project staff] and the and the wider reference group to to really nail down what it was we were going to do."*
>
> *Interviewee 7, Phase 1*

The reason for selecting electronic tablets for single shared assessment was to improve the quality of information collected by SSA and to speed up access to services for clients:

> *"…if we had the tablets, small tablets that staff could take out with them when they were going to complete a SSA in a patient's home they could um start that process there, come back to the office, put that into a docking station, finish off the assessment and then just forward that straight through to social work thereby saving time, saving social work time at the other side where they would have had an administrator having to sort of in put that information."*
>
> *Interviewee 1, Phase 1*

> *"…the principle behind this wasn't so much electronic SSA it was more that it could be, um the the information gathering stage would be simplified by using an electronic system to save on the the length of time handwriting etc on to a paper copy. That the idea was that the the at the information gathering stage that there was um there was failing potential um well I think there was potential failing to to to to do SSA …..or ensure that everybody had been done because it was such a tortuous and convoluted*

process and required having to be photocopied around all the different agencies. So the idea is the information gathering goes onto uh onto uh palm held template which then can be downloaded back at base."

Interviewee 7, Phase 1

"..certainly will reduce pressure in our office [social work] because they won't need to be ringing us all the time to actually ask for a CareFirst number. So people that are existing in the system, they [nurses] would be able to check whether the information's there, if there's a SSA."

Interviewee 6, Phase 1

Those taking this decision acknowledged the incompatibility of the health and social work databases used for SSA but hoped that e-SSA would provide a quicker and more efficient access to services for clients by improving the means of transferring information between agencies (without having to address the database problem). The inability for health to transfer data securely via IT to the Carefirst database used by social work for storing SSA data hampered the speed at which SSAs could be completed. The inability to transfer data directly between the systems resulted in time being spent photocopying and faxing information, and making telephone calls. Management acknowledged this issue when e-SSA was selected as the Skye & Lochash PATH project.

"Everybody, everybody everybody says it. It's not it's not just here. It is everybody. It gets raised at corporate level, it's you know it is an ongoing you know issue and and as we point out on a regular basis I mean I feel quite strongly that it's quite um you know a high risk governance issue to be quite honest. Um you know it it disables things from actually you know being able to meet its full fruition because you know you end up with a sort of piecemeal um sort of situation which I suppose we've just all got used to managing."

Interviewee 1, Phase 3

"It will never work properly until we have a compete electronic um system where we can transfer information uh you know the way it was designed to work because it's we're still going to have bits of paper and we're still going to it's it's still because we don't have a proper electronic database. And until we get the software written properly for it um where we can you know share it immediately with different agencies and we know exactly, we can see very clearly. Until we get that it's it's we're just going to muddle and with it and professionals will be doing the best they can with a bad job basically."

Interviewee 5, Phase 3

As discussed under 'Resources' section 5.3, the plan to purchase Carefirst licences so that non social work staff could access the database aimed to overcome the IT incompatibility and potentially some of the resistance to the idea of e-SSA. However, the purchase request appeared stuck with e-health at Mid Highland CHP.

"I've had numerous conversations um with e-health about it. Uh there's a strategic group in NHS Highland and Highland Council working towards moving this forward. And that's where it is. And I haven't been able to get any further with that at all."

Interviewee 1, Phase 3

The e-health department had also taken the decision to order laptops not electronic tablets as requested.

"They seem to put up more barriers than help, put it that way."

Interviewee 2, Phase 3

Awareness of evidence of the use of electronic tablets for SSA outside Scotland was mainly at higher management levels and focused on a pilot carried out in Nairn, Mid-Highland CHP. Awareness of electronic tablets in lower level management arose from the fact that social workers already had the tablets but did not use them when carrying out the SSA with the client, although some used the tablet back in the office.

"I know it's been piloted in certainly within NHS Highland in an area south east CHP, Nairn, although um in terms of the evaluation and progress with that it's been very hard to um to um really pin down what's happening with it and beyond that I'm not I'm not sure where there's electronic…"

Interviewee 7, Phase 1

"Well I mean there's, the evidence is um, I mean we had a similar project on, not quite the same actually, the Nairn project in Highland looked at the use of electronic SSA and there were some positives from that project but there were definitely some negatives and I think some of that unfortunately was around the sharing of the computer system because they were wanting to have the two systems talking to each other, connectivity based and that's where the project unfortunately fell a bit back on its face."

Interviewee 1, Phase 1

"They did a pilot when they spent, when they had two consultants to set up the software package, two different consultants to set up the software package. Then they did a pilot in Nairn…. but uh that then that seemed to be shelved, and I don't know, nothing's happened. And uh so I'm not aware of anything else, no."

Interviewee 5, Phase 1

"Why are we getting a tablet now to do a word document? Housing don't use them, CPNs never do a SSA, uh and we're getting tablets and I just think, like social work are they going to just sit there and gather dust. Social work don't use them. They've got 20 we could have borrowed and nobody uses them."

Interviewee 5, Phase 1

"I think one of the issues they have they were saying is that 'why are going for the tablets because even though social, you know like the care managers have the tablets, they don't always take them out with them and um you now they're they're still sort of

writing it out by hand and then coming in and using the tablets later. Now not all of them do that. Some of them definitely do go out and use the tablets. But you know that's their choice. We don't have that choice at the moment"

Interviewee 1, Phase 2

Authority structures could have been more effective in the transfer process. One participant stated:

"..and maybe a bit more support from management level for um to kind of take it forward. I mean they have they are supporting and they've said right this is what you've got to do but it would have been good to have them sort of liaising with social work, liaising with housing, liaising with the other teams to actually get them on board."

Interviewee 9

The decision to participate in the project did not come from the ground level but came from management. This was seen negatively by some stakeholders who stated a wish to have been involved in the choice of project. The decision to introduce e-SSA bypassed the difficulty for high level management in resolving the IT incompatibility between health and social work.

4.5 Readiness for change

There was a lack of readiness for change in some team leads and by implication, by some frontline users. Knowledge of both the project and how the electronic tablets would be implemented and used was patchy.

"*But there hasn't really been any consultation for, no consultation with us at all so so um it's really not widely known that, and we don't know when it is, we don't know anything really."*

Interviewee 5, Phase 1

"..but some of them aren't too aware of what of what they'll be expected to do.."

Interviewee 2, Phase 1

Lack of readiness for change was still apparent in April/May 2009 and again in some quarters in December 2009. One of the participants not directly involved in the SSA practitioners group stated in April that they had felt that nothing had changed since October.

"…practically we're no further forward than when we last spoke so and I I don't think my information is any different really to the way it was then."

Interviewee 4, Phase 2

With regard to other professionals not carrying out SSAs (and therefore reluctant to become involved with this project), one participant states:

"Well, we've tried to get them, they've been told that it's part of their job, they must do SSAs for six years, five, six years no. It doesn't make any difference. They don't use them. So what's changed? What's what's going to make them do single shared assessments?"

Interviewee 5, Phase 1

The minimal use of tablets by social work was perceived as partly due to the lack of training of new staff on their use and a general loss of momentum.

"Um I think some of it's to do with the culture, some of it's to do with it looking very official, when you take the computer out and set, and even a tablet is a computer. So when you set that up, and another part of that is the training issue and being comfortable using the technology, so yes there's lots of different elements in it."

Interviewee 6, Phase 1

"But I also think people have not really been trained on it. I've certainly never been trained on it and I've been here two years. And I think when you go out to see people you don't want to be there and spending a lot of time fiddling about with this system you don't really understand."

Interviewee 6, Phase 1

The inability to share client information from a SSA electronically between healthcare and social work and housing had a negative impact on opinions of electronic tablets in Skye & Lochalsh. While senior management held the view that electronic tablets would improve practice even without addressing IT incompatibility, others saw it as a key reason for not introducing electronic tablets.

"..we're going to be downloading it and attaching it to an email, sending it off. They're [social work] going to be downloading it at their end. So whether it would ultimately save time in that sense I don't know"

Interviewee 4, Phase 1

"..the biggest one being the lack of a shared IT um protocol or facility which would allow these to be genuinely rolled out …"

Interviewee 3, Phase 2

"There's all those questions to be answered yet which staff are already asking uh hum you know because it's it's this interface between health and social services which um. It's it's not really very joined up let's put it that way."

Interviewee 4, Phase 1

"…as I say we'll use them when we have to but you know if…expectation is is that we're suddenly going to use them very heavily um well we're not."

Interviewee 4, Phase 1

"…there's a wee bit of reluctance because I think there's a thing by some of the um specialisms as it were that sort of see SSA as something that was done to them. Um you know and they were told they had to use it and all sorts said well it doesn't meet

our needs and so therefore we won't. Um and it was never particularly, it wasn't ever enforced so um you know although everybody was told they had to use it, and you know it didn't actually, it never really came to fruition because it it wasn't actually sort of followed through."

Interviewee 1, Phase 1

While housing services had agreed to work with the project and were represented on the SSA practitioner group, there appeared to be a general feeling from key individuals that it was difficult to see a role for housing in e-SSA. Evidence suggested that staff in housing services were not very enthusiastic about involvement in the project due to workload and what was seen as repetition in information collected between housing and SSA documentation.

Housing had been excluded from SSA back when it was introduced five or six years previously, due to the complex legislation around housing applications. Effort had been made to incorporate housing in the PATH project. A proposal for health clinics for take up by homeless clients on a voluntary basis was considered but dropped due to concerns from the voluntary sector that this was inappropriate. By December 2009, consideration was being given to trying to identify from housing documentation whether it was possible to see if clients had received a SSA, with the intention of ensuring that all those who might benefit from a SSA had received one. All but two relevant housing staff had attended SSA training by this time, but reluctance and lack of ability from housing to see a role for themselves was evident.

Hospital staff also appeared to lack readiness for change through a reported lack of awareness of the significance of their work in relation to SSAs when completing hospital discharge documentation for patients.

However, the key stakeholders in Kinlochleven, and Gairloch/Aultbea appeared more ready for change and were enthusiastic about e-SSA and, disappointed with the arrival of laptops instead of electronic tablets.

"I think it [e-SSA] sounded like a really good idea. Um I mean nowadays we're using more and more kind of IT friendly um things and um a lot of my team are au fait with that, there's some of my team who are not so up to date with computers and IT. So for some of us it's it's welcomed, because it will make life easier……We work in a remote area. We don't have access to photocopying machines or faxes quite so easily um so the thought of having an electronic record which can just be you know just instantly transferred from place to place and transferred and shared was something that sounded really good."

Interviewee 9, Phase 3

"It's actually been quite detrimental [arrival of laptops] I think. It you know if that had been a tablet that could of worked, I think people would have been much more on board with this."

Interviewee 9, Phase 3

".. and it could be done there and then and um being able to write on the tablet and then that being automatically converted into legible handprint. You know sounded fantastic. And um then having the ability to email it across um certainly um was what really made me very keen to have the tablets but in the format that we you could do that. Um I thought it was a good way to support um community staff into using an electronic assessment tool. Because I think that's the nature of where we will go in the future. Um and so I felt it was a great opportunity to have it trialled and see how they got on with it.

Interviewee 8, Phase 3

"I think like most things you know that some people just probably would have been happier than others with it. But I think everybody would have because it was new, would want to try it."

Interviewee 8, Phase 3

Evidence indicates that considerable work was required initially to overcome resistance and/or lack of readiness for change in a number of interviewees. The relaunch of SSA helped to increase readiness for change in some but not all participants.

4.6 Ownership

There was little sense of ownership of the project in its earlier stages among those who were not involved in the initial decision to implement electronic tablets.

"…because although the team is aware of what's going on they've not really been part of the process, so far, um so I think there'll be quite a bit of sitting with staff, and encouraging staff to get involved and to use the system. Yeah. And probably some persuasion as well."

Interviewee 4, Phase 1

"I would think it's just trying to sell it properly to staff and trying to be enthusiastic and make sure that they really understand them and they know how they work and and um hopefully when they see that it is a bit easier then they'll they'll just start using it."

Interviewee 5, Phase 1

"I think it [involvement] would be a long way off."

Interviewee3, Phase 1

"But if they see no value, or all it seems to be is a drain on their time, then they're not, then they're not going to make it work."

Interviewee 6, Phase 1

"I told….at the management meeting that I have concerns….But they [electronic tablets] have been ordered. So I just shut up then. "

Interviewee 5, Phase 1

"..there are very few of us and it's it's um not difficult to get sucked into all kinds of other things….probably in the short term have a bigger priority."

Interviewee 2, Phase 2

The work of the Skye & Lochalsh SSA practitioners group saw an increase in feelings of ownership of the SSA process for its members following its work to improve the quality of SSA, including the adaptation of crib sheets from East Lothian and plans for a relaunch and associated training.

"Positive. People are enthusiastic. The unenthusiastic ones haven't turned up….um yes very enthusiastic and wanting to learn…"

Interviewee 5, Phase 2

"…we will be launching the crib sheets at the same time, to sort of go through that and present them …. how that's going to work. And they've been very well received. People think they are an excellent idea…"

Interviewee 5, Phase 2

"I think for the professionals working in the system it will produce a positive impact in that it will, you know, we'll have this assessment on on computer that we can adapt and add to, that we can transfer more easily and there will be access of information for nursing staff…"

Interviewee 6, Phase 2

The opinions of individuals not directly involved in the SSA practitioners group had not changed.

"Well single shared assessment is not a terribly popular concept I have to say um and there's been lots of...probably resistance isn't too strong a word, from staff using it. They will use it, but pretty reluctantly um because they look at the effort compared to the product and you know find that difficult to swallow sometimes especially when they are under pressure"

Interviewee 4, Phase 2

Neither did the enthusiasm extend to the plan to bring in electronic tablets. A participant who had voiced doubts about the electronic tablets in October was asked in April if their enthusiasm over the improvements to SSA had impacted on their opinion.

"No, not really because I've never seen them and I still feel that the only thing that is going to improve is the fact that if we type it up on this machine it's easier to to update it. But then I can do that on my computer at the office."

Interviewee 5, Phase 2

There were mixed feelings towards the electronic tablets.

> *"..people will see it as a positive thing to have such direct access to information regarding clients…"*
>
> *Interviewee 2, Phase 2*

> *"Why are we getting tablets when we can do it exactly the same, it's a word document, why can't we just do that on our computer? What's the value of a tablet?"*
>
> *Interviewee 5, Phase 2*

Practical issues around the use of the electronic tablet were raised by some participants, for example the need for the user to feel confident about using the tablet and the effectiveness of the handwriting recognition element.

> *"I suppose how user friendly it is and I think that we'll need to build their confidence in in. I suppose it's things like you know 'If I put all this information in the tablet, is it going to be there when I get back to the base? You know 'Will it save it properly?"*
>
> *Interviewee 7, Phase 2*

> *"It's I suppose staff confidence. Um in completing them and feeling confident and I suppose that's where for me you know relaunching it and regoing over it again hopefully will help I mean. But you will always have some staff you know who um feel more confident and competent at completing them than others. Um you know and that I don't think you can ever really get away from that cos I just think that's human nature."*
>
> *Interviewee 1, Phase 2*

> *"So I think there's a training issue in it um and it's got to have that hand recognition and I think that needs time."*
>
> *Interviewee 6, Phase 2*

There was some concern over how clients (particularly elderly clients) would react to staff using the tablets and whether the reduction in supportive communication would hinder the rapport with the client.

> *"I think at first staff will not be happy about taking them into houses. I think they might be a bit self-conscious."*
>
> *Interviewee 1, Phase 1*

> *"Whether people will feel that taking one of these tablets into an interview is intrusive, um I don't know, I don't know. I think they probably will. But you know maybe that will change over time."*
>
> *Interviewee 4, Phase 1*

> *"Out here you'll be….. talking to the patient, listening and then then you would be doing a lot of writing, so I think you will kind of lose the, I think a little bit will be lost in the kind of communication side of it.."*
>
> *Interviewee 5, Phase 1*

The value of electronic tablets for SSA was perceived differently across those who would be involved in their implementation. Individual perceptions changed little, if at all, between the two sets of interviews (October 2008 and April 2009).

The value of electronic tablets was seen more positively by higher level management who had been involved in or consulted over the decision. This was partly due to the fact they had an overview of the plans not yet communicated to the potential users or some team leads. Evidence indicated six months after the project initiation that neither full consultation nor communication of this decision had reached the potential users and had only recently reached their managers and team leads (October 2008). Evidence from the second set of interviews (April 2009) indicated more awareness of the plans for some individuals, but not all.

> *"I think it will improve information sharing. I think it will I think it will improve the uptake of SSA um because it will be an easier process and less time consuming and even if it can't be shared electronically um which I say would be ideal, I still think it will have a, have a beneficial effect."*
>
> *Interviewee 7, Phase 2*

> *"If you've got it electronically then you are able to keep it live um and it's much less work for the practitioners to do that than it is to have to start and rewrite a whole document again. Um So I think there is a lot of value in it….And there's a lot of hours taken up in this transfer transfer of information that will actually free people up to get on with the job that we want to do."*
>
> *Interviewee 6, Phase 2*

> *"I think if we had a um electronic system it would certainly make it more accessible to everyone. Um Less chance of duplication. You would have an access point for all the information."*
>
> *Interviewee 2, Phase 2*

The perceived value of electronic tablets was less in those who had not been involved in the original decision. These participants were predominantly team leads who would be responsible for implementing and using the tablets in practice.

Community nurses were the professional group currently carrying out the bulk of SSAs, followed by social work. Community psychiatric nurses had their own specialist assessment and did not carry out SSA because these were perceived as additional work to an already heavy workload. The allied health professionals had their own system of referrals and within this group it was predominantly occupational therapists who carried out SSA. Housing did not carry out SSA.

"I still don't quite understand what the benefit of it is at all."

Interviewee 2, Phase 1

"I don't see any value to a tablet, because um if we're sharing with all these staff and uh we're writing it onto this tablet, if staff have got bad writing and it doesn't recognise we're wasting a lot of time. You have to take it back, you have to edit it, whereas why not just write it on the sheet of paper, come back and type it on a normal computer. What is the value of a tablet? I'm very very concerned. I have raised my concerns already and I've been told that they've been ordered."

Interviewee 5, Phase 1

"So so I was kind of puzzled having come into this quite late given the the indepth work that I knew had gone in in 2002/2004 to identify all the issues around SSAs, that it appeared to me that a kind of quite a loose group of individuals have been asked to implement what to me is really a complex arrangement uh and decisions have already been taken, for example about purchasing technology.."

Interviewee 3, Phase 1

"I would say that um the team [CPNs] are pretty pragmatic and if they feel, or if they see that it improves the process then they will be fine with it. It'll make sense for them and they will go along with it. If they feel that it doesn't, then they won't. it really will be as simple as that. You know they are very practical people if you like um."

Interviewee 4, Phase 1

The negative perceptions of electronic tablets were acknowledged by senior management:

"You know people are pretty change fatigued at the moment ….People don't see necessarily the initial value of something."

Interviewee 1, Phase 1

"I suppose it depends on how easy it is to do. If it means that you're going to undertake, a SSA requires an interview um you know if the if the nurse or social worker's got her head down and staring at the tablet rather than speaking to the to the individual then that might be perceived as a potential barrier. I suppose how user friendly it is and I think that will need to build their confidence in…I suppose its things like you know 'if I put all this information in the tablet, is it going to be there when I get back to the base?' you know 'will it save it properly?"

Interviewee 7, Phase 1

"I think initially they [electronic tablets] won't [make a significant difference]. Because I think like every new system then you've got to sit down and do it."

Interviewee 6, Phase 1

"I wouldn't see the CPNs as as as being big users of SSAs because usually by the time they're involved it's it's sort of specialised stuff…. So the SSA should already be there in place and be available for the CPNs to use um and then obviously to sort of get the graphic information they require and they can then just look at the specialised side of things what they're needing to deal with."

Interviewee 1, Phase 1

It should be noted, however, that those who saw less value to the electronic tablets did express a willingness to be proved otherwise and stated that they would give the tablets a go.

"I will try very hard to make this work and I will go with it as best I can. But I have doubts."

Interviewee 5, Phase 1

As the project progressed, ownership of SSA increased in some participants. The work of the SSA practitioner group to improve SSA increased enthusiasm for the process in key stakeholders. This enthusiasm was predominantly in staff who used SSA, however, the evaluation of training sessions and anecdotal reports noted a positive attitude in general from attendees, even those who might only use SSA on an occasional basis. One participant who rarely carried out SSA commented:

"I think that like the district nurses up here they use it as their assessment. So for them it is brilliant because that's the documentation they use. They don't double up on it. So if if they then need to pass it on it is to them exactly what it says on the tin, a SSA. Whereas to somebody like myself, I use separate documentation."

Interviewee 12, Phase 3

All relevant staff except for two remaining housing staff and all hospital staff have attended training, including CPNs, community nurses, social work and occupational therapists.

"It [the SSA training] went very well. Yes and the feedback really was very positive um we had you know we sort of asked them um between one and ten you know how useful this felt. And I think we only had one below 5."

Interviewee 5, Phase 3

The increase in feelings of ownership towards SSA contributed towards the shift in focus of the project to SSA as opposed to e-SSA. This was added to by the arrival of laptops not tablets which was received negatively by some members of staff (see section 5.3). In December 2009 one participant commented that regardless of e-SSA and the question of whether the laptops would be used:

"And SSA I still think is a good assessment. I like it because you can go into somebody and know nothing at all and by the time you've gathered all this huge amount of information you certainly know a lot about them and I think it's very very useful. Um and it gives you a very good way of you know like identifying needs and um passing on to other agencies as necessary."

Interviewee 4, Phase 3

The need to resolve a number of recognised difficulties with SSA ie different approaches, incomplete documentation before implementing e-SSA had been seen as important from the

start of the project and contributed to some of the negativity towards electronic tablets. This was also shown in the positive responses to and attendance at SSA training. There was evidence that this was what many participants wanted.

> *"From a training point of view I was really expecting a lot of possibly rolled eyeballs and 'here we go again' um whereas everybody was actually a lot more positive about it which was quite nice. Um and it was quite good for a lot of people who have never done any training on SSA at all."*
>
> *Interviewee 12, Phase 3*

The work of the project was reported by an interviewee as having been beneficial in that it had brought people together to concentrate on improving SSA.

> *"I think that's one of the good things about PATH is it's made you look at what you do and how to improve it."*
>
> *Interviewee 6, Phase 3*

A number of interviewees reported the project as something they were told to do, as opposed to an innovation they had identified and pushed for themselves. This is key to the lack of feelings of ownership towards the introduction of new tablets. Users needed to be convinced that the electronic tablets will benefit them. While the work to improve SSA increased ownership of SSA, the delivery of laptops raised more negative questions towards e-SSA, and helped shift the focus of the project to the work to improve SSA itself.

4.7 Organisational factors

There were a number of organisational factors assisting or delaying progress. The question of how housing services would link into SSAs proved difficult to resolve. Housing had been excluded from the introduction of single shared assessment six years previously due to the complexity of housing application legislation. There were fundamental questions to resolve about how they would link into SSA (let alone issues around the use of electronic tablets).

> *"It's unfortunate that the way that this is set up I mean the um if the information is collated on an electronic tablet at the moment it is not going to be able to be directly transferred onto um the Highland Housing Register Database which is what this is held, holds the central housing list. All of that information is is input manually from these housing application forms. Um so essentially if there are um um if ….well if some one from health or social work carries out a SSA that highlights some particular housing needs… at the moment I'm not certain how that information is coming to us because I don't think we've ever had such a letter, a note, an email saying look we were were carrying out an assessment of this individual."*

Interviewee 3, Phase 1

> *"…my concern is that I'm likely to be raising quite a lot of really significant issues for her that she might have not thought through yet. And this is not a criticism …, it's just that I'm not sure whoever designed this this piece of work actually has understood the complexity of um the, it's not just a case of making SSA um work better for health and social work…"*
>
> *Interviewee 3, Phase 3*

By early 2009 recognition of the complexity of housing legislation had led to the decision not to include housing in SSA at this stage. After the plan to develop health clinics to which housing services could refer the homeless and those at risk of homelessness for health check ups was dropped the effort was made (at the end of 2009) to try to identify whether it was possible to tell from housing documentation whether a client had received a SSA or not, in order to ensure that all clients who required a SSA received one.

There were a number of factors in Mid Highland project supporting and assisting the transfer process. The strong history of partnership working and informal links between the different agencies and professionals due to the small number of people working in the area were perceived as positive.

> *"..there's a very strong history of partnership working and there's a lot of, at all levels, ….and very strong partnership working within the teams. That will help, that will help a lot…"*
>
> *Interviewee 7, Phase 1*

Despite the perception of strong partnership working, this was not reflected in the lack of inclusion of housing. There was evidence of partnership working in Kinlochleven and Gairloch/Aultbea. The two team leads had discussed the project with each other informally.

> *"I kind of caught up with [team lead] a couple of times either on the phone or by email or we bumped into each-other at meetings so um it's kind of nice to know there's somebody out there at the same stage as us.."*
>
> *Interviewee 9, Phase 3*

The Skye & Lochlash SSA practitioners group was set up to improve the quality and efficiency of SSA itself in order to provide a solid foundation for introducing the tablets. The group's relaunch of SSA and associated training aimed to create confidence and understanding in staff using SSA.

> *"…we set up the practitioners' group which I think has been really useful. And you know I think has been good for stimulating sort of debate and conversation about some of the potential problems and solutions around those problems."*
>
> *Interviewee 1, Phase 2*

> *"So it's looking at amending all the paperwork [SSA] and adjusting it and looking at how we would sell it and um making sure we've got aims and objectives because think if you're asking professional staff to take time out of a busy day it needs to be part of their CPD [Continuing Professional Development]."*
>
> *Interviewee 6, Phase 2*

> *"We'll be training training staff with SSA just to just sort of refresh peoples' memories and to try an get them to use it more. Um more in that um staff who have maybe not been using the SSA, to try and get them to participate eg housing um department and psychiatric nurses and eh yeah."*
>
> *Interviewee 5, Phase 2*

But one participant stated in relation to the relaunch of SSA and associated training:

> *"… but I feel perhaps you should perhaps um still wait a bit and get things right. Yeah, make sure things are right before we rush out and do it, so."*
>
> *Interviewee 5, Phase 2*

Another stated their profession's view of SSA was:

> *"…not something that they particularly enjoy and a lot of the information in there people find not terribly relevant really. Um it's just extra on top of an already busy job."*
>
> *Interviewee 4, Phase 2*

The intention in each of the transfer areas was to get the relevant agencies together to identify what was required with regard to work on SSA. However one team lead noted that this was proving difficult due to work commitments for her and her colleagues and reluctance of social work to participate fully due to the national level work to revise SSA.

> *"So then really um the next next step was to try and set up a practitioner group but again it's really very much been led by me because nobody else has really taken responsibility for this which would I mean it's fine but it's it's it's supposed to be a joint project a joint project led you know from social work you know all the other agencies but um I've really had to sort of chase everybody up"*
>
> *Interviewee 9, Phase 3*

As the project developed, a number of additional aspects were taken on which may have delayed (or have potential to delay further) the project's progress. These were the purchase of CareFirst licences (discussed earlier in this section) and associated training, and Staywell (a system of patient self-management).

"I think Staywell has also been has also become part of the project hasn't it? And perhaps adding that other dimension into it has also…um contributed perhaps [to the delay]."

Interviewee 7, Phase 2

"But we have to get community staff trained up for these MOTs and health checks, so that's in the process of being done at the moment."

Interviewee 5, Phase 2

While the organisational factors were not individually the most important reasons for the delay in the project, collectively their impact contributed to its slow pace, notably the taking on of additional aspects such as Staywell.

4.8 Conclusion

The results show the varying views of participants and reveal key factors behind the progress and development of the project. These key factors were the need for a leader to drive the work; slack resources; authority structures and the decisions taken; lack of readiness for change in some participants; lack of ownership of the practice in some participants especially at the beginning of the project; and organisational factors which helped the project progress in the case of the formation of the SSA practitioner group, or in contrast, limited participation in the project by the housing agencies. While the barriers to change were recognised by project management, work to overcome them was limited. The results are discussed and related to theory in the following chapter.

5 DISCUSSION

5.1 Introduction

This first part of this chapter discusses how the results reflect diffusion of innovations and organisational change theory and in doing so illustrate the key factors which enabled or hindered pre-transfer and transfer process in the study.

The second part of this chapter looks at the future plans for the PATH project and issues that may affect the success of transfer and sustaining new practice. This is followed by reflection on the implications of the study findings in relation to public health practice in general including what can be learnt from these in relation to similar work carried out elsewhere.

The fourth part examines the success of the framework and areas where it could be improved.

5.2 Leadership

While the project lead had the enthusiasm and experience to drive the project, they did not have the time. The heavy workload of the project lead impacted greatly on the time available to run the project. However, it is possible that if the drive for change had come from the frontline users or they had been ready for change, the project may have moved more quickly (Iles & Sutherland, 2001; Backer, David & Soucy, 1995; Barwick et al, 2005).

The project lead needed to create a situation more receptive to change ie to communicate the benefits of the electronic tablets more clearly to the team leads and potential users, and to target work to remove specific areas of resistance to change. The work of the SSA practitioners group to improve SSA increased the readiness for change in its members, with the relaunch of SSA and associated training, however, it was still too soon to know if the laptops would be used and improvements in the quality of SSA sustained.

While the decision to purchase the CareFirst licences to overcome issues with incompatibility of health and social care databases was a positive move towards creating a situation ready for e-SSA, the project lead appeared unable to push forward their purchase, for reasons that appeared to be deep set management and organisational issues in Mid Highland CHP. This is a barrier that may prove too difficult to overcome. Backer, David & Soucy (1995) state that interventions to overcome barriers to adoption of new practice must

be in place for change to be successful. The ability to engage the support of all management in Mid Highland CHP was not apparent.

Iles & Sutherland (2001) note that evidence from the management sector indicates that top management involvement was key to successful change but that the distinct hierarchy and attitudes in the NHS may make this different. Whether the inability to engage top level management influence was due to the hierarchy and culture noted by Iles & Sutherland was unclear.

The project leader took the decision in spring 2009 to introduce Staywell, a system of patient self management. This action was initiated by the project lead. While Staywell fits the aims of the project, it would also require time to get the relevant people across Mid-Highland CHP on board, time that was already scarce. While a potentially beneficial idea, this required time and work to set up, potentially detracting from the main project.

The two transfer areas both had project leads who were enthusiastic about the new practice but were also aware of the restrictions of time, workload and engaging partner agencies on their ability to drive the project. Both stated the desire to have been involved earlier to share in the development process. Newell et al (2003) argues that the importance of the development process in the success of a new practice can result in its failure to transfer. The development process within the study by Newell et al (2005) had resulted in professional barriers and preconceived notions being broken down to create a new context of practice. While the development process was less fundamental in practice development in Skye & Lochalsh, it was still a key part of the process. Kinlochleven and Gairloch/Aultbea not being involved at an early state was unlikely to affect the success of transfer in the PATH project in such a fundamental way but it would have encouraged knowledge transfer face to face (Backer, David & Soucy, 1995; Barwick et al, 2005).

Darr & Kurtzberg (2000) note that knowledge transfer occurs most often between organisations which share similar strategies and problems. There are strong similarities in the set ups between Skye & Lochalsh, Kinlochleven, and Gairloch/Aultbea. The latter areas had a smaller number of staff and fewer services based within the area but all three areas were working with the same agencies, in a remote and rural area, and affected by the same larger scale organisational issues e.g. funding, led by Mid Highland CHP.

Leadership is a key factor in organisational change and diffusion of innovations theory. There is a need for a key individual(s) who can champion the proposed new practice. The leader must convince those who will be using the new practice of its value and the need for change (Rogers, 2003; Newell et al, 2003; Pettigrew et al, 1992 cited in Iles & Sutherland, 2001; Barwick et al, 2005). However, while the project lead was enthusiastic about the project, they did not find the necessary time to take it forward within project timescales. The project needed a leader who could dedicate all their attention to it, as opposed to finding time on top of an already heavy workload. They needed to take the time necessary to actively convince frontline users of its benefits.

The leadership factor in this study reflects the experience reported by Newell et al (2003) in attempts to transfer a new practice to other hospitals. Newell et al (2003) reported that the hospitals reluctant to take on the new way of working cited the need for strong leadership as evident in the originating hospital plus the lack of time and heavy workloads of staff which would hamper attempts at practice transfer.

The Skye & Lochalsh SSA practitioners workshop created opinion leaders at a lower level of management who had responsibility for relaunching SSA and training, preparing the ground for electronic tablets. These individuals were enthusiastic about their role, but their influence as leads was limited to driving frontline users. But there remains the need for the project lead to ensure the momentum does not falter, improvements to SSA are audited and sustained, and that transfer is fully supported.

5.3 Resources:

While there were adequate resources to fund equipment and training, there were inadequate slack resources. As stated earlier, slack resources are the uncommitted resources available to an organisation (Rogers, 2003). In this instance the key slack resources missing were time and staff.

The remote and rural nature of the Mid Highland CHP area meant there was a small number of staff working with a small population over a sizeable geographical area. This makes it less likely that staff can be seconded to work on projects such as this as there is not staff available to backfill posts. In the case of this project there did not appear to be anyone readily available who could take on the role of project lead full time.

The decision to take on Staywell was taken by the project lead despite their acknowledged lack of time to dedicate to the main project's implementation and the lack of support from others on the Mid Highland project in terms of taking on some of its workload. While Staywell may benefit clients this raises the question that it was purchased because funds were available.

Time has been and will be a key resource. Time for SSA training proved difficult to find for some staff over the summer of 2009, resulting in further training sessions being organised into the autumn and winter in order to ensure all relevant people attended. Time for training hospital staff, audit and to sustain the momentum of the work will be required. Time to drive the new practice will be fundamental in Kinlochleven, and Gairloch/Aultbea.

Rogers' theory considers time in terms of the pace of diffusion of an innovation. However, the pace of diffusion was not key to the delay, the delay in Skye & Lochalsh, the delay here was in the implementation.

5.4 Authority structures

Rogers' theory sees the decision to take on a new practice as something that is made after a process of deliberation. The adopter considers the advantages and disadvantages of a new practice or technology before taking the decision to adopt it. Electronic single shared assessment was not a consensus decision, rather an authoritative decision. It was taken by a small number of individuals who had the status and position to do so (Rogers, 2003).

Rogers' theory categorises potential adoptees into different types according to characteristic attitudes to new technology and practice, for example, innovator, late adopter. These categories are difficult to apply to the Mid Highland project. The decision to adopt electronic tablets for SSA was not a decision taken solely in response to an identified need or awareness of a new practice. It arose from the offer of funding for a project for a specific group of people to improve access to health, social care and voluntary services, to be completed within a set timescale.

Awareness of evidence of electronic tablets for SSA elsewhere was of a pilot carried out in Nairn (also in Mid-Highland CHP) a few years previously. The extent of awareness of evidence varied between the individuals interviewed, but was predominantly very limited

and had been received by word of mouth. There was no awareness of evidence elsewhere in the UK prior to the request for a search for evaluations.

Evidence indicates that a shared social identity can make individuals more at ease when sharing knowledge (Kane, Argote & Levine, 2000; Gruenfeld, Martorana & Fan, 2000). Knowledge transfer occurs more often between organisations who share similar strategies and problems (Darr & Kurtzberg, 2000). The influence of evidence and the increased likelihood of knowledge transfer from a strategically similar partner and/or a shared social identity is reflected here in the awareness of good practice from a similar area. Nairn is within the same CHP as Skye & Lochalsh and is also rural, although with a larger urban population. Awareness of the pilot appears to have come through general CHP links.

Rogers describes the decision to take on an innovation as an act of information seeking and processing. Factors relating to advantages of a new practice or technology include perception of its attributes as being better than the preceding practice. In this case, use of electronic tablets was perceived by some individuals as a means of improving the information collection process with the client.

Perceptions of the compatibility of the new practice varied. The advantages perceived by those making the decision were not necessarily felt by those closer to where it would be used. Those closest to its usage cited the problems with SSA and queried the potential benefits more than those at the higher level of management who tended to see the problems with SSA as surmountable and worth the effort to overcome. Rogers' view of compatibility is the degree to which the innovation is seen as consistent with existing values, past experiences and needs of potential adoptees. The fact that social workers had the tablet computers but did not use them when carrying out the actual assessment lowered their value in the eyes of some individuals, but was seen as minor by others who cited lack of training as amongst the reasons for non use.

Trialability, the ability to observe the new practice in use elsewhere, is another stage in Roger's theory of diffusion of innovations. The Mid Highland project was planned as the pilot stage, with the practice then to be transferred into other areas in Mid-Highland CHP. No sites were identified where the current use of etablets for SSA directly with clients could be observed. Representatives from the next areas identified for practice transfer have been

invited by the project lead to observe the Mid Highland project (from April 2009) with the aim of making the transfer of etablets into other areas easier.

Iles & Sutherland (2001) refer to organisational change as 'planned' or 'emergent' sometimes a combination of both. In this project there was a definite push and plan for the change. However, while the need existed, it had not become great enough for the change in practice to occur from the ground level. The decision was taken at a high management level to participate, the funding was provided, and the decision on what to use it for (within the project remit) then taken.

The lack of IT compatibility for SSA between health and social work was well recognised by high level management, but was a difficulty recognised as insurmountable at that time as it would need to be resolved at a strategic level, the decision lying beyond the influence and resources of senior management in the project or Mid-Highland CHP

5.5 Readiness for change

There are strong indications that Skye & Lochash was not ready for this change in practice. The decision to implement the tablets did not come from the individuals who would be using them. The awareness of evidence by some team leads of the electronic tablets came from their lack of use by social work. Communication to frontline users of the decision to transfer in the benefits of electronic tablets was slow.

Kinlochleven, and Gairloch/Aultbea appeared to be ready for change. This did not appear to be particularly due to the work already underway in Skye & Lochalsh since the Kinlochleven, and Gairloch/Aultbea team leads had not been aware of the work until summer 2009. Evidence indicated that their readiness was due to positive attitudes towards change and new technology. Both were already aware of the potential benefits of e-SSA and welcomed the opportunity to introduce it.

Perceived need and pressure for change are two key factors in readiness for change (Backer, 1995; Backer, David & Soucy, 1995; Barwick et al, 1995). Some team leads did not see a need to bring in electronic tablets and noted they had not been consulted over the decision. Pressure for change existed but this was with regard to SSA not the tablets and only by those who used SSA. Backer, David, Soucy (1995), Barwick et al (2005) and Iles and Sutherland (2001) all cite the need for commitment from frontline users who must believe that a new

practice will work and benefit them in order for it to be successful and be sustained ie be ready for change. This was lacking in Skye and Lochalsh as was the motivation necessary for successful transfer (Szulanski, 2000).

Newell et al (2003) noted resistance to new practice in their study because staff felt the changes undermined their status and responsibilities. Iles & Sutherland (2001) cite Kanter et al, (1992) and Dawson (1996) who report that reasons for resisting change may include increased workload; surprise; concerns about competence in a new context; and the view that the change outweighs the benefits, all views that are apparent in those unconvinced about the value of the planned change in Skye & Lochalsh. The expectation of increased workload and the lack of perceived value and benefit of the new practice in Skye & Lochalsh amongst some potential recipients was evident.

However while there was awareness that resistance would be likely, little action was taken (pre-April 2009) to convince potential users that electronic tablets would make their work easier, although the Skye & Lochalsh practitioners group may be seen as an intervention to overcome barriers through its aim to resolve the difficulties with SSA. Interventions to overcome barriers to change are necessary if the new practice is to be successful. The lack of intervention to overcome potential resistance can lead to low morale and weaken the project (Backer, David & Soucy, 1995; Backer, 1995; Barwick et al, 2005). Attitudes of some individuals towards the new practice reflected both of these.

There appeared to be a general acceptance at the higher management level that some potential users would not be happy with the new technology but that was just a fact of life (in the same way others would be enthusiastic) and dissenters would just have to use it.

There is a need for new users to have the ability to move on from old practices to the new (Szulanski, 2000). This means the capacity to absorb and use new knowledge. There is no evidence that potential users of etablets in Skye & Lochalsh did not have the ability to do so and evidence suggests resistance may have been more to do with workload and perceived value. These factors were reflected in the resistance to participating in the project or training by housing and hospital staff, respectively.

5.6 Ownership

The lack of time for the project lead to drive the project and heavy workloads for other practitioners limited work to encourage ownership in frontline users.

The work of the practitioner group leading to the relaunch of SSA helped towards creating a sense of ownership for SSA which had previously been lacking. This reflects the theory that the people who will be using a new practice should be involved in its implementation (Backer, David & Soucy, 1995). However this did not create a sense of ownership of electronic tablets. The enthusiasm in improvements in SSA did not necessarily change individual views on the value of the etablets. Doubts about the value of the electronic tablets remained for some individuals, and attitudes towards the delivery of the laptops were even more negative in some.

The relaunch of SSA was through training in the new improved practice cascaded down from members of the SSA practitioner group to their work colleagues reflecting theory on the benefits of a shared social identity when transferring knowledge (Kane, Argote, Levine, 2000). Direct contact is seen as the best method of transferring tacit as well as explicit knowledge (Argote & Ingram, 2000). It was intended that the relaunch of SSA would provide the foundation for the implementation of electronic tablets.

The relaunch of SSA and training on the tablets aimed to improve understanding and confidence in SSA and electronic SSA. The potential need for training in a new technology or practice may be necessary for users to feel confident (Backer, David & Soucy, 1995; Iles and Sutherland, 2001). In the Phase 2 interviews there were comments that some potential users would not be happy with learning to use the tablets. Ownership still appeared to be lacking and resistance seemed to be expected. Evidence from the final set of interviews indicated that the relaunch of SSA helped participants see the potential usefulness of electronic SSA, even though some of the feelings of ownership were to be dampened by the delivery of the laptops.

Ownership is strongly linked to perceived value of the new practice. Rogers' theory of diffusions states that for an innovation to be adopted, the adoptee(s) must see a value in taking on the innovation, that it will benefit them and the effort put in to make the change will be profitable in some way eg financially, time saved, increased quality of work or product (Rogers, 2003). Backer (1995) and Barwick et al (2005) note that convincing

potential recipients of the need for change may involve making the new practice attractive to members of the organisation and convincing them it will make their work easier.

The value of electronic tablets for SSA was perceived differently across those involved in the project implementation. This was to a large extent influenced by their opinions of the current use of SSA. People at the lower level of management (and either carrying out SSA or closer to those doing so) generally saw the problems as greater than those at a higher level who, while acknowledging the need for improvements in SSA, saw the problems as less difficult and something that could be overcome or improved on with the introduction of the tablets.

It was acknowledged that the introduction of electronic tablets would result in extra work for those health professionals not currently using them, the benefits being to their clients whose needs would be addressed quicker and more efficiently. The extra work, time and training to use the tablets was acknowledged as a potential barrier to the change in practice. Extra work and time will be a potential barrier to use of the laptops. Despite a general willingness to give it a go, the low motivation of some individuals initially towards the new practice reflects the theory that motivation is determined by perceived need, pressure for change and relative advantage of the new practice (Backer, David & Soucy, 1995; Iles & Sutherland, 2001).

5.7 Organisational factors

There were a number of organisational factors that assisted or possibly delayed the practice transfer process. Adaptation of the practice or transfer plans played a significant role. Adaptation may be necessary to fit the new practice or technology to the new context and/or to create a sense of ownership and to adopt and sustain the innovation fully. Reinvention of a practice when implemented elsewhere can ease and speed up the process (Rogers, 2003; Williams, 2007).

This study reflects the theory that adaptation is needed to fit the practice to the new context. This supports Rogers' theory as opposed to the argument put forward by Szulanski & Jensen (2006) who report that adaptation hinders transfer while direct replication assists it. It may be that replication assists transfer if it is replication of a successful practice or technology where all difficulties during implementation or in sustaining implementation have been ironed out. To replicate the experiences of the Nairn pilot directly into Skye & Lochalsh

would have repeated the IT difficulties that prevented this pilot from being rolled out. As it was, the Mid Highland project adapted the Nairn experience first to focus on improving collection of information and not address the issue of incompatible databases and later to re-include transfer between agencies via the purchase of the CareFirst licences which would give healthcare staff access to the same database as social work.

The practice was re-invented to an extent in that it can be argued that with the non-arrival of electronic tablets, the improved SSA not e-SSA becomes the transferred practice.

The role of housing was adapted from plans to incorporate it as a key agency in electronic SSA, to plans to see if there was a means of identifying from housing documentation whether clients had received a SSA. This was a result of major difficulty perceived in incorporating housing into the SSA process, but the desire not to exclude the homeless from the project. The work to adapt the role of housing was led by the project, not by housing which at times appeared not to see its service as having a role in SSA or e-SSA. The intention was to overcome resistance to change through adaptation of the form of the practice to suit housing but it was unclear as of December 2009 whether this would be successful.

The adapation of the crib sheets from East Lothian was necessary for them to fit the practice in Skye & Lochalsh fully, in order to serve as a checklist and they would be adapted again to fit the services available in Kinlochleven, and Gairloch/Aultbea. The adaptation also helped create a sense of ownership by each group of professionals in that the crib sheets were adapted to indicate what each group of staff specifically needed from the local SSA process.

The adaptation of the crib sheets reflects theory of partner similarity (Darr & Kurtzberg, 2000). It was initiated by the PATH project and awareness of work in East Lothian and knowledge of similarities between the SSA in the two CHPs. However, these were adaptations of SSA, not the use of electronic tablets.

5.8 Transfer and future plans

It remains to be seen whether the momentum of the project can be sustained through to completion of transfer and the embedding of the new practice into everyday routines. Issues include the need for the team leads to find the necessary time (slack resources) to drive the

project in Kinlochleven, and Gairloch and Aultbea and to be able to engage staff from the other sectors.

There was an element of shared social identity between the two areas and Skye & Lochalsh e.g. remote and rural location, CHP management. This can be seen as beneficial to transfer in that individuals may be more at ease in sharing knowledge with those with whom they share a similar background (Kane, Argote and Levine, 2005). The project lead and team leads knew each other already on a professional basis and were aware of similarities in work structure, systems and issues experienced by clients.

The transfer process reflected the five main characteristics of Rogers' theory. Relative advantage was seen in the potential to improve SSA as had been carried out in Skye & Lochalsh. It was compatible with the new context and consistent with the systems in the new areas. It was relatively straightforward and its results could be seen from the pilot in an area with a similar system, structure and issues.

The audit of SSAs following the completion of training will indicate whether the relaunch of SSA has been successful and these results are likely to prove fundamental in sustaining the improvements to SSA. It may be that this part of the project alone (without electronic transfer) will result in quicker access to services for clients as intended. It was stated in the impact assessment report that the intention was to try and establish a way of identifying types of people who have received a SSA, how long their care plans were active for and whether referrals to services were completed.

It remains to be seen whether the laptops will be regularly taken out to clients and used for SSAs or whether staff will continue or return to handwritten SSAs. It also remains to be seen how the use or not of laptops will affect the outcome of the project ie to speed up SSAs. It can be argued that the focus of the project has shifted to the improvement of SSA, as opposed to implementing e-SSA and e-transfer. This can be seen in the increase in ownership and readiness for change in staff who carry out SSAs, following the work to improve its quality. Part of the resistance in some individuals came from their perception that there were problems and inconsistencies in how SSAs were being carried out which needed to be resolved before e-transfer was brought in. Improving SSA mattered more to some individuals than bringing in the electronic tablets.

The project is currently at the implementation stage in Rogers' theory. The final stage will be sustaining the use of the new practice. While the indications of this are positive with regard to SSA, they are less clear in relation to the use of laptops.

5.9 Implications for public health

The main issue arising from this case study that has implications for public health practice is the time it takes to transfer a new practice into a remote and rural area. Remote and rural areas appear to have fewer staff available to move into a secondment and do not have the capacity to backfill posts as quickly as many urban areas.

It is not possible within this project to assess individual workloads but it can be assumed that these are no different than those of other health and social care staff in Scotland. The difference appears to be few slack resources. The key individuals need to be freed up to do this type of work e.g. team leads in the new areas require sufficient time to drive the project.

It can be argued that the project set its own pace, transfer eventually being achieved albeit only at the end of the extended schedule, and then only the initial stages of transfer. The project was not the highest priority for its participants, thus it was not allocated the time necessary to drive it. Its development moved at the pace that fit the overall priorities of those responsible in Skye & Lochalsh for leading the work. Indications of similar time issues in the two transfer areas suggest that this pace will continue. Resistance to change (due to lack of use of SSA) in some quarters meant that while there were not active attempts to slow down the project, there was not the impetus for some stakeholders to seek more active involvement.

The support and enthusiasm from a number of stakeholders to improve the quality of SSA was fundamental to the shift of the project focus to SSA from electronic SSA. Electronic SSA would not be worthwhile unless the process it was improving, SSA, was itself high quality. The fact that there were clearly recognised difficulties with the SSA process were recognised and stated by those using it, and resulted in some of the resistance to electronic SSA expressed at the beginning of the project.

Even though the plan for electronic tablets has not transpired, the plans to do so have resulted in an improved quality of SSA in Skye & Lochash. There was also an unplanned benefit as the Skye & Lochalsh SSA practitioners group became aware through work on

SSA of the need to look at improving information sharing when hospital patients are discharged.

The cribsheets were adapted and seen positively as an aid to doing the job properly. These acted as a reference tool and checklist for partner agencies to ensure the individual completing the SSA collected the appropriate information and understood why it was necessary. Checklists are increasingly being used to improve practice in healthcare in a number of medical areas. They have been used for decades in aviation and the construction industries (Gawande, 2010). There is substantial evidence that international implementation of surgery checklists has reduced death rates and complications following surgery. While a standard surgical checklist was designed, it is expected that the individual hospitals will adapt this to fit their local procedures and practice (Gawande, 2010; WHO, 2009). The precise means of improvement has not been identified but appears to be due to a number of reasons including changes in systems and behaviour resulting from the introduction of the checklists into work practice (Haynes et al, 2009).

The cribsheets may have the potential to improve the quality of the service for the client. Two of the problems with the quality of SSA prior to the project were incomplete SSAs and users being sometimes unclear as to the information required by other agencies. The cribsheets now help make this clear through a list of information needed by each professional group. They have the potential to help speed up client access to resources since they should result in users no longer having to seek clarification or for a SSA to be returned to a member of staff for clarification.

The lack of consultation over the choice of new practice is reflected in the lack of ownership which in turn has had a negative impact on timescales. The idea had not come from frontline users. As a result, time was required to win frontline users over and create a sense of ownership. This remained true even with regard to the later development and shift in the project focus. It should also be noted that despite the sometimes negative comments about the project from some participants, some still stated their willingness to give it a go. The degree of enthusiasm appears to be reflected in the perception of likely benefits in the new practice and in the strength of partnership working between some participants.

Audit will be necessary to measure the effectiveness of the new practice in speeding up access to services for clients. A SSA audit tool designed and implemented in Skye & Lochalsh has been transferred to Kinlochleven and Gairloch/Aultbea.

The difficulty in addressing the IT incompatibility between sectors reflects ongoing work to create an overall IT database for the NHS in England. It is complex and costly. Its benefits include centralised medical records, e-prescriptions, and computer network links between NHS organisations but critics are concerned over cost and confidentiality. Cost and complexity are two of the issues facing any work to resolve the health and social work database incompatibility in Mid Highland CHP, while confidentiality was reported as one of the issues requiring careful consideration before giving NHS staff access to the Carefirst database.

5.10 Evaluation of the framework for assessment and evaluation of evidence

Overall the framework was successful in the assessment and evaluation of evidence. It acted as a checklist in identifying the stages of organisational change and knowledge transfer, highlighting elements in the process and indicating areas in the process that were not included, yet were an intrinsic part of it.

The framework was successful in capturing the key elements in organisational change in the transfer process. However, there were some significant gaps. The framework does not concede to the arrival of the laptops instead of tablets. This was key in confirming the shift of the project to SSA as opposed to electronic SSA. While the framework recognises resistance to new practice and allows for the analysis of failure of new practice to be embedded into normal practice, it does not cover the fact that it may not turn out to be what was expected. In this instance it was the failure to produce the key resource, conflicting views over the value of its replacement and the impetus this gave to the already occurring shift in the project focus from e-SSA to SSA.

The inability of high level management to change an element within their organisation is another area not covered by the framework. The IT difficulty was well recognised but had not been addressed by Mid-Highland CHP.

The third element was the project working to its own timescale. The framework lacked a measurement of time, this absence assuming that the project would meet its deadlines or if it

did not, slippage would not be significant. Innovation and new technology do not diffuse at a constant speed, which is not picked up by the framework. In fact the delays were significant, the project deadline eventually being two years later than planned, and even then (December 2009) transfer remained in its early stages, as opposed to completed and further roll out being contemplated. Time became a key aspect of the project, linking in with issues of leadership and ownership.

5.11 Conclusion

The results of my study indicate that the factors that enable successful practice transfer in a remote and rural setting are likely to be strong leadership, slack resources, readiness for change in the staff who will use the new practice along with ownership and the perception of the new practice will benefit them; and its adaptation to suit the new context. These are lacking or missing to some extent in my study. Their absence has hindered the process of successful transfer.

6 CURRENT CONTEXT, CONCLUSIONS AND REFLECTIONS

6.1 Introduction

This chapter aims to bring the context of my study up to date. The first part of this chapter looks at the strengths and weakness of the research. The chapter then updates the study findings in relation to policy and management issues, further evidence of practice transfer in remote and rural healthcare settings, the use of e-tablets and similar technology in healthcare settings, and narrative in quality improvement.

In the next section I reflect on my research experience. The chapter concludes by summarising the key issues from the discussion in relation to whether the results can be generalised to other areas, identification of areas where more research is necessary, and how the study illustrates key elements of organisational change and knowledge transfer.

6.2 Strengths and weaknesses of the research

The study findings should be qualified with respect to its strengths and weaknesses. The study is an example of real-life research, the delays in the project illustrating how difficulties arise with the introduction of new practice alongside everyday workloads. The real time situation allowed for exploration of issues that slow down transfer of innovations and practice change. As a result the findings have been presented in thematic context rather than each individual interview phase.

The lack of existing research on the transfer of new practice in a health and social care setting in a remote and rural area has left me unable to compare the findings directly to evidence from a similar setting. However, the large body of evidence on organisational change provides a consensus of opinion on the main themes of this area, and contains elements of the theoretical framework based on diffusion of innovations.

The theoretical framework was a key strength in this study, creating a structure for organising, assessing and evaluating evidence. While time is an element within diffusion of innovation theory, the theoretical framework was not suitable for measuring and analysing time. However, this was possible through analysis of action plans, minutes and emails.

The openness of the interviewees over negative opinions of the project helped overcome the potential difficulty of obtaining sufficient depth of data from the small sample. Care did

need to be taken to ensure that evidence backed up some of the statements made by some interviewees. For example there was a general consensus that communication and partnership working is good. While evidence indicates it is good, there is evidence of where it has been lacking but the size of the sample does not allow this issue to be explored further.

Likewise it was not possible within the boundaries and resources for the study to explore whether some of the issues raised as characteristic of this remote and rural area are in fact, specific remote and rural issues, for example distance and time taken to travel to clients and meetings, and heavy workloads.

The slow pace of the project towards transfer meant that it was not possible to interview all the key participants in Kinlochleven and Gairloch/Aultbea as these individuals were not yet sufficiently engaged in the project. The slow progress towards transfer of practice and the shift in focus of what the practice was became defining factors in this study.

6.3 Policy and management issues affecting Mid-Highland CHP

It is informative to consider this study in relation to the wider policy and management context in NHS Highland and beyond. The decision by NHS Highland and Highland Council to replace SSA with Personal Plans, a professional assessment tool for use with individuals requiring social care, has impacted on the project. Currently under development, Personal Plans will provide a single access to facilitate and support adults who need social care and provide easier access to assessment and resources. It has almost certainly ended any likely possibility of further transfer even though SSA will continue to be used until the Personal Plan initiative is ready for implementation (Highland Community Care, 2011). Other high level policy also impacted on the project. At the time of the study the Community Psychiatric Nurses (CPNs) were preparing for integrated care pathways (multi-disciplinary care pathways for patients based on guidelines and evidence for specific patient groups) and this was absorbing a considerable amount of the team lead's time and would further negate the need for CPNs to use SSA.

The project seemed to lack a champion at the higher management levels in that there did not appear to be management pressure on those responsible for its implementation to keep it a priority. The Mid Highland project was not the most important or urgent task in the project lead's workload.

The project lead had been unable to redress the problem of being sent the wrong software, due to insufficient influence outside the Mid-Highland CHP and the apparent lack of someone the highest management level to resolve both this problem and the difficulty over obtaining permission for Carefirst licences for the nurses. Limitations of power and influence were also important in partnership working between healthcare, social work and housing. The project lead did not have the power to make the other agencies participate. Participation was down to whether the work of the project was seen as sufficiently beneficial to their clients, which it was for social work but clearly was not seen as such for housing.

The project lead was also restricted by the nature of the small community in a remote and rural area. Given that a large proportion of the population in Skye & Lochalsh would know each other socially or had social connections, there was more pressure to maintain good working relationships with both their own staff and partner agencies than in an urban area with a larger population.

6.4 Further evidence on practice transfer

Before concluding this dissertation, it is useful also to update the wider context in which the study was carried out. The following sections draw attention to evidence relevant in a broader sense to this study, or which has been identified since the study was completed and which it is useful to note alongside the results. These are: the transfer of best practice in remote and rural areas; the use of new technology similar to e-tablets in healthcare; the transfer of evidence into practice; and narrative in quality improvement research.

6.4.1 *Remote and rural context:*

Since this work was carried out I have identified a review of international best practice in service delivery to remote and rural areas (Scottish Executive Social Research, 2002). Although none of the examples of best practice are in healthcare and only one is set in Scotland, the review identifies a number of key themes in successful projects which reflect those arising in my study. The shared themes relating to best practice in rural service delivery are: the early establishment of formal partnerships between groups involved in specific activities; consultation at a local level; supporting local issues and demands; a focus on access to the new practice and how it can benefit specific local groups as part of a commitment to reducing socio-economic exclusion in the community; and the fundamental need to have local ownership and management.

The Mid-Highland project focused on access for a specific group with the aim of reducing socio-economic exclusion. Partnerships between groups already existed. Management was local, and local issues and demand were supported. However, there was a lack of early links in the Mid-Highland project between all partner agencies, a lack of local consultation, and initially local ownership. Work to overcome these barriers was limited.

The review also notes that the more successful projects secured government spending and support. Interestingly, this was in reverse in my study, the government funding being provided before the best practice was identified and thus was the incentive for identifying best practice to transfer. It also notes that although Scotland is ahead on innovative development of rural services it is weak on the dissemination of best practice (Scottish Executive Social Research, 2002).

6.4.2 *The use of new technology similar to e-tablets in healthcare:*

Telehealth, videoconferencing, the use of personal digital assistants (PDAs), electronic computer tablets and similar technology have increased in use across the NHS over the past decade. Initiatives in Scotland have been targeted in particular at improving the effectiveness of healthcare in remote and rural areas, for example pulmonary rehabilitation sessions and cardiology clinics by videoconference; rapid access tele-clinics involving tele-consultations between consultants in acute hospital with patient at GP practice in remote area; and email phototriage of urgent skin cancer dermatology referrals (Scottish Centre for Telehealth, 2009).

Personal digital assistants (PDAs) are increasingly used by healthcare staff for a range of needs including as a general medical reference for issues such as drug interactions, clinical decision pathways and administrative tasks. A Canadian systematic review carried out in 2006 of use of PDAs in healthcare (including Blackberry and Palm operating system devises) identified 23 surveys which indicated increasing PDA use. The authors found that although there were limitations in the evidence they could take from the surveys identified, younger physicians and staff working in urban or hospital based practices were more likely to use PDAs and use was equal between genders (Garrity and El Emam, 2006).

Like electronic computer tablets these are a portable handheld computing device. Unlike the intended purpose for the electronic tablet in my study, PDAs can be used for a wide range of tasks including personal use, administrative use, accessing electronic medical records,

medical records and patient reminders (Garrity and El Emam, 2006; Honeybourne et al, 2006). With evidence of their increasing use, it may be assumed that familiarity with these devices would encourage the use of similar technology by healthcare staff, even allowing for a potentially slower speed of take up in remote and rural areas.

Since this study was carried out I have identified a further evaluation of the use of electronic computer tablets (East of England Ambulance Service NHS Trust, 2008). A survey was carried out to identify patient views of the use of electronic tablet computers and electronic patient care records, including views on the impact of the staff using the tablet when attending the patients.

A sample of 1000 patients who had electronic patient records and were attended by ambulance staff using the e-tablets were sent a questionnaire. The response rate was not high, 39.9%, but it is still useful to consider the results. The findings indicated that most patients did not have a preference with regard to whether their patient records were on paper or electronic, while of those who expressed a preference, 70.3% stated a preference for the electronic version. The 3.1% patients who expressed concern over electronic records made negative comments on the speed and ease of use and that the computer distracted from patient care. It is interesting to note that 24.2% of patients stated they were not aware that staff were using the electronic tablet, and the majority of the rest of the patients did not feel it detracted from their care. Electronic and paper patient records were perceived as equally secure although there were conflicting views from patients over their safety (Maillardet, 2008).

The fact that this was a survey of ambulance service patients may have affected the responses in that the incident the patient was asked to recall would have been an emergency for them. It is still interesting to compare these views with those made by some participants in my study who expressed concern that the tablets would act as a barrier between them and the patients, and that since a large number of their caseload were elderly, these patients would be more likely to distrust the use of an electronic tablet. The age breakdown of the East of England Ambulance Service survey indicated a mean of 64.6 years and a median of 72 years (Maillardet, 2008).

The perception of the impact of technology on patient consultation was also reported in a survey of attitudes to eHealth of doctors and nurses in remote and rural general practice in

the UK (Richards et al, 2005). This survey was carried out in 2005 so its attitudes may be outdated. It found that patient privacy in video-conferencing was a concern as was the possibility of negative impact of technology on the contact with the patient. It also found that nurses were less experienced with computers and less likely to have used eHealth technology. The other main barrier to use of eHealth was perceived cost and workload. However, in contrast respondents reported good experiences of using eHealth and saw it as potentially beneficial for such uses as obtaining laboratory results, ECG transmission and educational video-conferencing (Richards et al, 2005). Although experience, particularly nurse experience with eHealth may have improved since this date, my study began in 2007, only two years after the publication of this paper and therefore can be seen as reflecting some of the attitudes towards technology noted above.

6.4.3 *Transferring evidence into practice:*

The literature review focused on the transfer of practice in or between organisations. The decision to exclude papers on the transfer of research evidence into practice was taken because this involves a vertical transfer of evidence directly from research from sources such as journals and academic organisations rather than the horizontal transfer of existing practice from one area into another. However, there are some elements shared with the transfer of best practice from one workplace to another seen in this study that are useful to note. Effective research impact across sectors has been found involve strong leadership and enthusiastic individuals to progress the process, ownership from the target group, credibility (good evidence it works, opinion leaders) and targeting of barriers to enable transfer and implementation (Walter, Nutley, Davies, 2003a). The same authors also argue that evidence cannot be separated from interactions and relationships of practice. The context and the understandings and attitudes of the organisation(s) and individuals will impact on new knowledge. A focus on the local context such as attitudes, skills and practice is necessary to implement new knowledge or practice successfully (Nutley, Walter, Davies, 2003b).

Leadership is an issue discussed in detail earlier in Chapter 4. The focus on the local context, in particular attitudes and skills is an area where practice transfer was hindered as a number of frontline staff were unsure or unenthusiastic about the project.

6.4.4 *Narrative in qualitative research:*

Narrative research can be seen as the study of how people experience the world (Moen, 2006). It has been used increasingly in fields such as education, the arts, sociology, and in qualitative research as a method of inquiry or frame of reference. These stories depend on the values of the individual, their experiences, who they are speaking to, and the time and location they are doing this, and thus may present more than one voice as the story unfolds. Narratives cannot be separated from their context and cultural setting. It is constantly changing. The researcher role is to try and understand and make sense of these stories (Moen, 2006).

My study may be seen as reflecting a narrative approach to research through the unfolding chronology of events, detailing the shift in focus of the project, decisions and events. The narrative approach also makes the researcher more visible in the role of interpreter of findings (Riessman, 2004). This is different from the qualitative researcher position I have taken which is to minimise my identity as researcher and effect of my research with the interviewee as opposed to acknowledging the different potential positions of the researcher, for example my role as an outsider yet one with a vested interest in what is happening with the project.

Narrative research is commonly presented in a case study. While case studies are not high in the hierarchy of study design they are valuable in exploring the context in a way other study designs do not. The case study design allowed for exploration of the context and relationships around practice transfer, its methods including document review as well as in-depth interviews. Case studies have been perceived by some researchers as lacking in meaning outside their membership of a group of similar cases providing a context in which to understand them, while other researchers argue for the value of case studies as a representation of one context which may have aspects that can be generalised to other situations. The value of case studies can be seen as relying on the authenticity of the researcher's observations and interpretations and the rigour of the methodological approach (Greenhalgh, Russell and Swinglehurst, 2005).

6.5 Reflections on the research experience

My dual research role on the Mid-Highland project as both PATH project researcher and as researcher for this dissertation was beneficial in giving me access to wider aspects of the

study context than may have been possible if I had the single role of researcher for this study. While the geographical distance between Skye & Lochalsh and my base in Lothian meant that one to one contact was limited to pre-arranged visits that had to be scheduled some time in advance (sometimes logistically difficult), my role on the wider project meant I could keep in touch with project developments and decisions and was involved in discussions on these with the PATH project manager and research registrar. The geographical distance helped give some independence from local and political pressures.

The case study design was successful in providing the structure to explore the events in depth and in providing a fluidity to adapt to what actually happened as opposed to what was planned. Sufficient data was collected although a third set of interviews had to be scheduled in order to do this. This third set of interviews resulted from my major concern during this study, that is, whether there would be enough data for me to analyse. The project took a long time to get off the ground and even then progress was slow leaving me wondering at times whether there would be a study. As it was, the focus of the research question 'What factors enable or hinder successful practice transfer within a remote and rural setting?' shifted to the process of practice transfer as opposed to successful practice transfer.

Updating my study in line with changes in the context that it is set emphasises its ongoing narrative aspect. The conclusion below reflects the fact that the study shifted its focus yet still provided evidence around transfer and its process.

6.6 Conclusion

This study asked 'what factors enable or hinder successful practice transfer within a remote and rural setting?' It has fulfilled its objective, though not entirely as expected. Rather than illustrate the key factors around transfer of new practice, the focus has been on the issues around the process leading up to practice transfer. The work to improve SSA has provided the impetus for practice transfer but has also become the practice to be transferred, more than e-SSA. With more time, it might have been possible to study and evaluate the complete transfer of practice and further roll out to other areas in Mid-Highland.

There are a number of areas where it may be possible to generalise from the results of this study to others. The slow pace of the project illustrates theory around organisational change and the diffusion of innovations. The project has allowed exploration of the issues around

the process leading up to transfer and has identified reasons why the new practice may or may not be sustained,

A number of potential areas for future research arose from the findings of this study. These include: testing the theoretical framework (with revisions) in other studies; identification of the factors that make practice transfer in a healthcare, social care and partner agencies in remote and rural areas different from urban areas; how best practice needs to be tailored to fit a small scale service; attitudes to telehealth among healthcare staff in remote and rural areas; and how and why project timescales differ in practice to planned timescales (using diffusion of innovations as a theoretical basis).

The last suggestion arises from the discrepancy between what was expected by project management to be sufficient time to transfer practice to the time it actually took just to get to the transfer stage. A final area for further research is an exploration of the reason(s) why the project lead introduced additional pieces of work to the project at the same time as they acknowledged progress was slow due to lack of time to do the work. Health clinics were planned but not introduced. Staywell was planned but did not get off the ground. Both required staff time and effort which was already acknowledged as in short supply for the main project.

There is a lack of research around transfer of new practice in healthcare and specifically remote and rural areas. This case study explores some of the issues that arise pre-transfer and may indicate specific issues such as the timescales of introducing new practice into a remote and rural area. Overall, the project demonstrates key elements of organisational change and knowledge transfer, perhaps the most significant being the need for change to come from ground level and frontline users. The frontline users saw a need for change in the way SSA was carried out, rather than the need for electronic SSA, and this eventually was the main aspect of the project. This change in focus did not change the research question which aimed to identify the factors that enable or hinder practice transfer. It merely resulted in a focus on the process of transfer.

Results are consistent with the evidence discussed in the literature review. The study relates closely to theory around organisational change, reflecting the need for potential users to believe in and see the value of the new practice; to be involved in its implementation; and a

leader with time to champion the new practice to all involved. It is hoped that the research helps to fill the gap in evidence on practice transfer in a rural healthcare setting.

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Figure 1: Map showing Mid-Highland CHP, by Mette Tranter, HIU, NHS Lothian, 11 June 2010. Reproduced by permission of Ordnance Survey on behalf of HMSO, Crown copyright and database right 2010. Ordnance Survey licence no. 0100022972

APPENDIX I
SEARCH CRITERIA AND DETAILS OF INCLUDED PAPERS

SEARCH CRITERIA

Databases searched

Articles were selected for review following a search of databases using the NHS Scotland e-library (www.elib.scot.nhs.uk) which gives access to a wide range of databases. Those search included: OVID Medline, Journals@OVID Full Text, All EBM Reviews Full Text, Cochrane DSR, ACP Journal Club, DARE, and CCTR, British Nursing Index, Cumulative Index to Nursing & Allied Health Literature, EMBASE, ERIC, HMIC Health Management Information Consortium, PsychInfo, NASW Clinical Register, Pubmed. Health organisation websites and library catalogues were also searched eg University of Edinburgh and NHS Lothian. These databases were chosen because they cover an extensive range of publications and sectors. However, search results were limited due to the lack of published evidence on the transfer of practice in health and related sectors. Published evidence on organisational change and knowledge transfer covers a wide range of sectors outside of healthcare including engineering, information technology and retail food franchises.

The limited results from electronic databases led me to follow up references of references in order to extend the search, plus a general internet search using 'google scholar' to identify relevant papers and journals not covered by the databases.

Keywords

The terminology used in relation to transferability of evidence is varied and often interchangeable, therefore, a range of keywords were used during the literature search. These were:

transfer, transferability
knowledge transfer
knowledge transfer healthcare
best practice transfer
organisational change
transfer rural
knowledge transfer rural
evidence transfer
good practice transfer
technology transfer

I sought papers focusing on:

- the transfer of best practice or knowledge transfer in the NHS;
- literature reviews of organisational change within the NHS;
- the transfer of best practice or knowledge transfer in other sectors;
- literature reviews of organisational change in general.

The definitions of knowledge transfer, best practice, and organisational change stated in section 2.3.2 were used to inform the inclusion and exclusion criteria.

Inclusion criteria

English language only publications from the UK and overseas were included. Searches were limited to the past 15 years.

Inclusion of research on organisational change is limited in this review to papers on organisational change in a NHS context and to literature reviews which identify the key factors in organisational change. This is due to the extensive amount of literature covering this subject which includes a wide range of theories, models and frameworks developed across sectors such as economics, business management, psychology and sociology.

Exclusion criteria

Publications focusing on the transfer of research evidence into practice or policy making were excluded. The transfer of research evidence into practice focuses on dissemination of evidence by the researcher(s) which is identified by the receiver through means such as conferences or published literature, as opposed to the transfer of evidence of existing good practice between organisations. Transfer of research evidence into policy is about transfer or research into the higher level of policy and decision making with the assumption it will pass down through to practice. In addition, the large number of publications on research transfer into practice or policy making was too extensive to include as part of this literature review. The exception was made for Barwick et al (2005) as this paper included a literature review on knowledge transfer.

Search results

I reviewed titles and abstracts of each article identified in the search to determine whether the article met inclusion criteria.

I identified 106 documents of which 19 satisfied the inclusion criteria and were selected for review. Fourteen specifically focused on the knowledge transfer process between or within organisations, three in a healthcare setting, of which one was an NHS healthcare setting. Twelve were primary research (i.e. reports of original research), three secondary research (i.e. collections of primary research) and four opinion articles.

APPENDIX II

ORGANISATIONAL CHANGE AND KNOWLEDGE TRANSFER - Included papers

Author	Study population	Methodology	Objective	Limitations	Findings
Almeida, P., Kogut, B (1999)	USA	- patent citation analysis of important semiconductor innovations - case control methodology - regression analysis to test for localisation on knowledge - quantitative research (peer reviewed)	To investigate the **relationship between the mobility** of major patent holders and **the localisation of technological knowledge** through the analysis of patent citations of important semiconductor innovations	- unique location (Silicon Valley) in terms of inter firm mobility suggests unlikelihood of generalising results to NHS.	- mobility of engineers between organisations influences local transfer of knowledge - flow of knowledge is embedded in regional networks
Argote, L., & Ingram, P (2000)	n/a	- opinion - presents a conceptual framework for analysing knowledge transfer in organisations based on author theory.	Argues that creation and transfer of knowledge is basis for **competitive advantage** in firms.	- opinion only although expert opinion - refers to knowledge as the basis of competitive advantage between organisations ie different context than NHS organisations	- argues that interactions among people, tasks and tools are least likely to fit the new transfer context; - shows how organisations can increase competitive advantage by transferring knowledge internally and preventing its external transfer to competitors ie through embedding knowledge in interactions involving people.

Author	Study population	Methodology	Objective	Limitations	Findings
Backer (1995)	general but in context of substance misuse field, USA	- opinion article, one of a collection of essays published in Backer, David & Saucy, 1995)	To discuss **readiness for change** and the implications for technology transfer	- expert opinion not research	- puts forward concept that improving practice by transferring good practice involves a process which, if successful, leads to organisational change - need to assess readiness for change - interpersonal and social factors play key role in determining readiness - readiness can be lowered by too much change 'change fatigue' - need for leadership or a 'change agent'
Backer, David & Soucy (1995)		- opinion - literature review - qualitative survey	To review **individual and organisational change** and implications for technology transfer	- predominantly expert opinion and theory	- summarises knowledge base on technological transfer - awareness and access to new knowledge required - need for evidence that new practice will benefit without excessive costs or unwanted effects - resources - active interventions to overcome barriers to change

Author	Study population	Methodology	Objective	Limitations	Findings
Barwick et al (2005)	Childrens mental health services, Canada	- literature review - qualitative research involving survey and consultation with experts	To explore expert views on implementation of evidence based practice in children's mental health	- this paper was included because of the **literature review on knowledge transfer** - findings on implementation of evidence based practice in children's mental health are not included here	- partnership with all stakeholders helps knowledge transfer - knowledge is best transferred face to face - transferring knowledge is part of larger contexts of innovation and change - needs and preferences of stakeholders should be considered - change is complex and needs planning and strategies - an organisation can create culture receptive to change - assessing readiness for change is integral to success of knowledge and practice transfer and adoption - effective leadership is necessary - resistance to change requires understanding

Author	Study population	Methodology	Objective	Limitations	Findings
Darr, E., Argote, L., Epple, D (1995)	Pizza franchises, USA	- data collected from a total of 36 pizza stores owned by a total of 10 different franchisees from the same pizza organisation. - analysis of learning curve - quantitative & qualitative research	To examine the **acquisition, depreciation and transfer of knowledge acquired through learning by doing** in service organisations	- pizza organisations with high staff turnover (including management) which will result in loss of knowledge and experience; - USA	- knowledge acquired by learning by doing transferred across stores owned by same franchisee - knowledge did not appear to transfer, however, across stores owned by different franchisees - only significant correlation was between franchise membership and business strategy (T+.451, p=0.03) - relationship between customers marginally significant (T=.214, p=.093)
Darr, E., Kurtzberg, T (2000)	Pizza franchises, England	- quantitative modelling using a learning curve framework to test impacts of partner similarity and knowledge transfer - qualitative data analysis of 33 interviews with franchisee, managers, and supervisors	To examine the conditions under which **partner similarity** enhances knowledge transfer	- generalisability an issue because single type of organisation with simple technology (pizza making and delivery)	- strategic similarity is more important than customer or location similarities as a significant predictor of knowledge transfer - businesses are aware of strategic similarities within their industry and choose partners for knowledge transfer accordingly

Author	Study population	Methodology	Objective	Limitations	Findings
Gruenfield, D.H., Martorana, P.V., & Fan, E.T (2000)	students, USA	Longitudinal study:- 29 work groups involving 91 student participants. Randomly assigned to work groups of 3 or 4 members meeting once a week. After 6 weeks, one member randomly assigned to another group for 2 weeks before returning to original group for 2 weeks. Individual essay, group essays and questionnaires analysed for social perceptions and unique ideas.	To investigate consequences of **temporary membership changes** for itinerant members and indigenous members of origin and foreign work groups	- artificial conditions for group membership changes. - itinerant members chosen at random rather than for specific expertise - no control group - possible that findings not due to membership change but to factors such as time, attendance at lectures and learning etc.	- all members produced more unique ideas after itinerant members returned to group or origin than before they left or while they were away - views of itinerant members significantly less likely to be used by the group in an essay on group work. - itinerant members viewed on return as highly involved in group work but more argumentative and although produced more unique ideas than indigenous members, essay contributions were seen as less valuable.
Hansen, M.T (1999)	electronics company, USA	Qualitative and quantitative data study Network study of 120 new product development projects undertaken by 41 divisions in large electronics company. Archival and survey data used	To explain role of **weak ties** in sharing knowledge across organisation subunits in a multiunit organisation	- generalisability: - study carried out in a single electronics company - study focused on product development and product development time, therefore, outcomes may not hold for other outcome variables etc degree of innovation or final costs - limited to interdivisional relationships and did not take account of other potential sources of knowledge eg emails	- weak interunit ties speeds up projects when knowledge is not complex but slows them down when knowledge to be transferred is highly complex.

Author	Study population	Methodology	Objective	Limitations	Findings
Hinds, P., Patterson, M., Pfeffer, J (2001)	students, USA	Study 1: 28 participants (11 beginner, 11 experts). Task involved directions to complete an electronic circuit Study 2: 72 participants. Same task also including videos of 2 experts and 2 beginners from study 1 Quantitative research Questionnaire	To examine how **experts compared with beginners convey instructions** to novices using teaching of an electronic circuit task.	- participants recruited from different student populations which may have contributed to detected differences - use of videos for instruction for information to control information presented. Although commonly used in organisations, this may not adequately convey tacit information - artificial study situation	Study 1: Experts used more abstract and advanced statements and fewer concrete statements when giving task instructions to novices Study 2: - beginners instructed novices performed better than expert instructed novices and reported fewer problems with instructions - although novices performed better on target task when instructed by beginners, they did better on a different task (same domain) when instructed by experts
Iles, V & Sutherland, K (2001)	NHS, UK	-multi-method -identification of theories, concepts -consultation with academics, management consultants and NHS managers -systematic literature review of approaches, models etc peer review analysis and discussion of findings	To review evidence on **change management** to provide a resource and reference tool for the NHS.	-lack of information on the effect of organisational culture, political issues, leadership, incentives and policy on NHS change -focus on strategic change rather than ground level change	- highlights factors in meeting organisational change in the NHS - no single tool or method will suit all situations - highlights factors that differentiate higher from lower performers - includes summary of reasons for resisting change

Author	Study population	Methodology	Objective	Limitations	Findings
Kane, A., Argote, L., Levine, J (2005)	students, USA	-144 students performed a production task in three-person groups. Halfway through task, a member from a different group rotated into each group. -primary dependent variable was where the group adopted production routine of rotating member -analysed for predicted effects -quantitative & qualitative research	To examine the effects of **social identity** and knowledge quality on knowledge transfer across groups	- study acknowledges that task characteristics (ie demonstrability of task) and group characteristics may affect results - study had limited amount of time for knowledge transfer (although this may realistically reflect situation in organisations.	- groups more likely to adopt rotator routine when they shared a superordinate social identity with that member compared with when they did not - superordinate groups adopted the production routine of the rotator when it was superior to their own, but groups that did not share a superordinate identity with the rotator generally did not adopted the rotator's production routine, even when it was superior to their own and would have improved performance - significant interaction between social identify and knowledge quality (x^2 (1,N-48)=6.74, p<.01)
Movery, D. C., Oxley, J, E,. & Silverman, B.S (1996)	Industry, USA	-quantitative research -measurement of citation patterns from patent portfolios.	To examine interfirm knowledge transfers with **strategic alliances**. To analyse changes in extent to which partner firms technical resources overlap as a result of alliance participation	- issue of generalisability as US and industry	- equity joint ventures appear to be more effective conduits for transfer of complex capabilities than are contract based alliances. - lower levels of transfer occur in unilateral contracts than bilateral nonequity arrangements. - some support for importance of absorptive capacity - some alliances used for accessing rather than acquiring capabilities - learning with alliances is complex

Author	Study population	Methodology	Objective	Limitations	Findings
Newell, S., Edelman, L., Scarbrough, H., Swan, J., & Bresnen, M. (2003)	NHS hospital, UK	- research is part of larger project examining best practice development and transfer in five different industrial/technology sectors within the UK - qualitative research - grounded theory - case study	To explore **process of knowledge generation and transfer** through a detailed examination of a NHS project team attempting to develop and disseminate an improved practice for diagnosis and treatment of cataracts	- clinical setting in NHS hospital in the Midlands - single case study, although was part of larger research study	- transfer was not successful. Authors argue that the key to understanding why this happened lies in how team was successful in designing the new practice ie the process involved in its development which the new team had not been through - templates developed may still be useful in transfer of this practice
Nonaka, I (2000)	Japanese organisations	- opinion - theory proposed	To put forward Japanese business approach to managing creation of new knowledge	- opinion only, although expert opinion	- tapping **'tacit'** and subjective insights, intuitions of individuals and making them available for testing and use by organisation - articulation and internalisation of tacit knowledge
Shaw, B et al (2005)	UK, Canada, USA, Indonesia, Norway	- Cochrane systematic review - randomised controlled trials - quantitative and qualitative analysis	To assess effectiveness of strategies to address specific identified **barriers to change** in health professional performance	- lack of research, therefore, lack of clear results - focus on barriers and interventions to overcome them, rather than factors that enable change	- could not say whether barriers were valid, whether the specific intervention had addressed them and which barriers were the most significant - concluded that more research needed in this area

Author	Study population	Methodology	Objective	Limitations	Findings
Szulanski, G (2007)	US	- presents a process model of knowledge transfer - cross-sectional analysis of primary data to illustrate model - data collected through 2-step survey of 122 transfers of organisational practices within eight firms - quantitative & qualitative research - peer reviewed	To offer a process model of knowledge transfer which identifies stages of transfer and factors that are expected to correlate with **difficulty at different stages during transfer**. Process model offers framework to classify transfer related problems and lessons from solving them.	- sample selection bias (information only on successful transfer was provided by participating companies) - cross sectional nature of data precludes strong causal inferences - questionnaire survey involved retrospective re-call of transfer process - fixed interval survey may miss measurements sensitive to specific stages of transfer	- evidence supports claim that relative importance of predictors changes as transfer progresses. - unexpected finding in that motivated recipient can intensify difficulty during ramp-up stage, rather than mitigate difficulty as expected - negative co-efficient on lack of retentive capacity during ramp-up. May indicate unlearning barriers present. Indicates there may be a natural pace for organisational knowledge transfers to occur.
Szulanski, G & Jensen (2006)	mailbox franchises, Israel	- qualitative and quantitative research	To report in depth field investigation of relationship between **presumptive adaptation**, adaptation that removes diagnostic value of the original practice, and transfer effectiveness.	- can be generalised to franchises but limited relating to transfer to healthcare system and elsewhere. - presumptive adaptation carried out in this study was done due to perceived cultural differences and lack of understanding of key aspects of the system, which would be immediately understandable in other cultural contexts	- study and results indicate that this is a representative counter example to theory concerning presumptive adaptation, ie doesn't work. Best results were seen by replicating original system as closely as possible rather than adapting it.

Author	Study population	Methodology	Objective	Limitations	Findings
Williams, C (2007)	International	- qualitative and quantitative research - model tested in context of international transfer relationships among telecommunication services firms.	To present model of knowledge transfer in which firms replicate because knowledge is ambiguous and adapt because knowledge depends on context. To explore role of **replication and adaptation** in knowledge transfer relationships	- context is international telecommunications firms -	- study found that actions of firms transferring knowledge are consistent with the theory that knowledge is simultaneously context dependent and causally ambiguous

APPENDIX III

Mid Highland CHP project: INTERVIEW SCHEDULES

PHASE 1 – OCTOBER 2008
The following schedules indicate the themes to be addressed in the interviews. Interviews will be semi-structured and therefore the actual questions asked may differ to an extent in wording and order, although the themes will be followed. Open questions will be asked as much as possible to ensure responses to questions are as informative as possible and to allow the researcher to explore issues as they are raised At the end of each interview the participant will be thanked and offered a final copy of the research report on completion of the study.
PROJECT CO-ORDINATOR/LEAD PERSON(S) QUESTIONS
- What is your role in the project?
- How and why was electronic single shared assessment selected for implementation in this area? Who was involved in the selection?
- Are you aware of evidence of similar good practice elsewhere?
- What makes this practice work?
- What do you think are the factors that make this practice transferable into Skye and Lochalsh, and then on to other areas in the Mid Highland CHP? What elements are transferable?
- Are these specific local factors or are they generic?
- What aspects of this practice may not transfer?
- What do you think may have to be adapted for transfer to specific areas, why and how?
- What potential difficulties have been identified with regard to the implementation of new practice?
- What do you see as potentially helping the transfer of practice?
- What resources will be necessary to implement this practice? Eg time, training, funding, equipment, office space, staffing
- What are the views of those who will be responsible for implementing the new practice? Do they require training or any new resources?
- At what stage do those who will be working with the new practice become involved?
- How does the project fit in with current practice and policy?

KEY STAKEHOLDER QUESTIONS
- What is your role in this project? How do you see your role?
- How and why was electronic single shared assessment selected?
- Have you been involved in any of the decision making?
- How were you informed about the project?
- What are the local issues around electronic single shared assessment?
- What do you hope the new practice will achieve?
- What do you think are the factors that make this practice transferable to your area?
- Do you think the practice will need to be adapted before implementation? If so, why and how?
- Have any difficulties been identified with regard to the transfer of practice? What do you think may be the barriers to its implementation?
- What do you see as the factors that will help its implementation?
- What resources will you need? eg time, staffing, funding, equipment, office space
- Are you aware of evidence of similar good practice elsewhere?
- How does this practice fit in with current practice/policy?

PHASE II: APRIL/MAY 2009
Themes to be discussed following preparation for, but prior to transfer and implementation of new practice
PROJECT CO-ORDINATOR QUESTIONS
- Please could you update me on where the project is now. What happens next?
- What is the schedule for bringing in electronic tablets?
- What needs to happen for electronic tablets to be introduced?
- Have you purchased the tablets? *[explore problem with ordering tablets]* How many and 2where are they going (pilot scheme)
- Have the CareFirst licences been purchased yet for staff other than social work?
- How did the decision to purchase CareFirst licences come about?
- How do potential recipients feel about using the electronic tablet?
- Have there been any changes to the aims of the project? If so, what are they and why have they been made? Who took the decision to make the changes?
- What resources will be/have been required for the transfer in of electronic tablets? Is/was it accessible and affordable? Will further resources be required? ie staffing *[explore slack resources*]
- Who will be the key people involved in transferring in electronic tablets?
- Are housing now linked in fully?
- Apart from the re-launch of SSA, what aspects of practice have you had to/will you have to adapt or change for its successful transfer, and why? ie local context
- Have views changed in relation to electronic tablets following work to improve SSA and plan to purchase of CareFirst licences?
- What impact do you think the SSA training will have?
- Has the project turned out to be more work than expected, or not?
- Am aware of issues around recruitment in remote and rural areas – has this had an impact in this project ie backfill?
- Why do you think the project has taken longer than originally scheduled?
- In retrospect, is there anything you would do differently?

KEY STAKEHOLDER QUESTIONS - Community Nurses
- What has been your involvement in the project since we last spoke?
- Do you take part in any meetings relating to the project?
- What will be your role/will you have a role in the planned transfer in of electronic tablets?
- What's your view on the practitioner group? Do you think this will contribute to the success of electronic tablets for SSA?
- Do you think the practitioner group can keep the momentum going with the improvements to SSA and the crib sheets?
- What are the plans for the re-launch of SSA?
- Have you views of the electronic tablet been affected by the work to improve SSA and purchase of CareFirst licences?
- How do the community nurses feel about using the electronic tablet?
- How many etablets are being allocated to the community nurses? Is this sufficient?
- Do you think the purchase of CareFirst licences will resolve the IT issues?
- What resources will be required for the transfer in of electronic tablets?
- Do you think it is accessible and affordable? Will further resources be required? Do you think people will come to the health clinics [via housing services]? resources
- What aspects of practice have you had to/will you have to adapt or change for its successful transfer, and why? ie local context
- In your view, does anything still need to be done now before electronic tablets can be introduced?
- Do you think electronic tablets for SSA will be successful? What will be key to making them work?
- Do you think the CPNs and social workers will use the tablets? Do you think there is any remaining resistance?
- Why do you think the project has taken longer than originally scheduled?
- Is there anything you would have like to have done differently with regard to this project?

TEAM LEAD QUESTIONS - Social Work
- What has been your involvement in the project since we last spoke?
- Do you take part in any meetings relating to the project?
- What will be your role in the planned transfer in of electronic tablets?
- What's your view on the practitioner group? Do you think this will contribute to the success of electronic tablets for SSA?
- Do you think the practitioner group can keep the momentum going with the improvements to SSA and the crib sheets?
- What are your views now about the use of electronic tablets?
- How many etablets are being allocated to the social work? Or are they using the existing tablets? Is this sufficient?
- Do you think the purchase of CareFirst licences will resolve the IT issues?
- What sort of an impact will the nurses using CareFirst have on social work workload?
- What resources will be required for the transfer in of electronic tablets?
- Do you think it is accessible and affordable? Will further resources be required?
- What aspects of practice have you had to/will you have to adapt or change for its successful transfer, and why?
- Does anything still need to be done now before electronic tablets can be introduced?
- There was some resistance to the project back in October, do you think this has been overcome?
- Why do you think the project has taken longer than originally scheduled?
- Is there anything you would have like to have done differently with regard to this project?

KEY STAKEHOLDER QUESTIONS - Housing
- What has been your involvement in the project since we last spoke?
- Do you take part in any meetings relating to the project?
- How has housing been involved in the practitioner group and the production of the crib sheets? What are your views of the practitioner group and its work?
- How will housing target likely candidates for the health clinics?
- Do you think people will use the planned health clinics? Potential issues?
- What are the housing staff views of planned health check clinics?
- Are there any other aspects of practice have you had to/will you be adapting or changing as a result of the practitioner group work and why? ie local context – health clinics
- What resources will be required for the health clinics? Staffing? Referrals? Funding?
- In your view, do you think housing will be using SSA in the future? Etablets? CareFirst licences?
- Will housing be able to link into eSSA in any way? Ie sharing information – will this be through informal/formal links?
- Why do you think the project has taken longer than originally scheduled?

NB: housing will not be carrying out SSA at this time because of complications around legislation for assessments and documentation. Health check clinics will be set up – bookable appointments

PHASE III: NOVEMBER/DECEMBER 2009
Themes to be discussed following transfer of new practice
PROJECT CO-ORDINATOR/PRACTITIONER GROUP LEAD QUESTIONS
- Have there been changes to the plans since we last spoke? If so, what are they, why have they been made and who took the decision?
- What is the current position with SSA training?
- What is the status with the electronic tablets? What are the plans for training and implementation of e-SSA?
- Is anyone using e-SSA yet?
- What aspects of practice have you had to adapt for implementation/transfer, and why?
- What aspects of the transfer have been successful and what are the factors influencing this?
- What's happening re: Carefirst?
- How is the work to integrate housing progressing?
- What is the position with Staywell?
- What would you do differently in retrospect?
- Have there been any aspects of the project which have not been successful and why?
- What plans do you have for monitoring the use of electronic tablets and for getting feedback?
Transfer:
- What has been your contact with the Kinlochleven and Gairloch/Aultbea?
- How receptive are they?
- What resources are required for the transfer of good practice and its implementation into Kinlochleven and Gairloch/Aultbea? Are these accessible and affordable?
- How will the transfer process be managed?
- Who are you liaising with during the transfer?

TEAM LEAD QUESTIONS community nurses/CPNs/OTs
- What has been your involvement in the project since we last spoke?
- What is your current involvement in the SSA practitioners group?
- How has the training and relaunch of SSA gone? How has it impacted on you and your colleagues?
- What was the reason for laptops not electronic tablets arriving? How do you feel about using laptops not tablets?
- What is your current role in the implementation of laptops?
- What's your view now of e-SSA? Has it changed?
- How do the community nurses/CPNs feel about using the laptops as opposed to electronic tablets?
- Have the Carefirst licences been set up yet?
- Have you needed any additional resources?
- How are the health clinics working? *(nurses only)*
- Are you aware of staff from any other agencies using the laptops for e-SSA yet?
- How do you see your future role?
- Are you involved at all in the work to transfer practice to Kinlochleven and Gairloch/Aultbea?

NB: the schedule was updated in line with information that laptops were to be used in practice, not electronic tablets

TEAM LEAD QUESTIONS social work
- What has been your involvement in the project since we last spoke?
- What is your involvement now in the SSA practitioners group?
- How has the training and relaunch of SSA gone?
- What is your current role in relation to e-SSA?
- How do you think the use of laptops not tablets will affect SSA? How will it affect social work?
- Do you think the social workers will start taking tablets/laptops out to SSAs again following the relaunch?
- Are you aware of staff from any other agencies using the laptops for e-SSA yet?
- Have the Carefirst licences been set up yet? If so, has there been any feedback?
- Have you needed any additional resources?
- Have you had any input into the health clinics?
- What else do you think needs to be done to make SSA/e-SSA more efficient?
- How do you see your future role?

TEAM LEAD QUESTIONS housing
- What has been your involvement in the project?
- How are housing currently involved in the work on SSA and electronic tablets for SSA?
- How has the relaunch of SSA gone? Has it impacted on housing in any way?
- Does housing have a role in the implementation and use of electronic tablets? How do you think this has gone? ie What have been the issues?
- Do you think there is potential for housing to be involved in SSA and electronic SSA?
- What would be required for this to happen? eg resources, changes in practice
- Are you aware of any staff from other agencies using the electronic tablets yet?
- Can you update me on work with the health clinics?

TRANSFER RECIPIENT QUESTIONS
- How did you hear about the PATH project – SSA and e-SSA?
- What did you know about e-SSA prior to this project?
- How useful do you think the tablets/laptops will be?
- Are you going to adapt the use of e-SSA? What aspects of practice have you had to/are you going to adapt or change for its successful transfer, and why?
- Are you going to adapt or use the crib sheets used for SSA in Mid-Highland?
- What aspects of the transfer have been successful, and why/what are the factors influencing this?
- What aspects of the transfer have not been as successful, and why/what are the factors influencing this?
- Who has been/are your contacts in the PATH project?
- What would you do differently in retrospect?
- What resources were required for the transfer of good practice and its implementation into another area? Were these accessible and affordable?
- How will the process of transfer be managed?

APPENDIX IV - FRAMEWORK FOR ASSESSMENT AND EVALUATION OF EVIDENCE

Data was organised and assessed against the framework stages below. The data had first been categorised against organisational change theory. The framework delineates the stages of transfer and the key factors within these stages.

Stage of project/transfer/implementation
Pre-implementation
Identification/awareness of evidence
Understanding of new practice
Identification of need for change
Awareness of evidence on new practice and form of communication eg conference, journals, anecdotal, guidelines
Awareness of what makes new practice work
Decisions
How practice was identified
Key factors for selection of this practice
Who took the decision
Type of decision ie optional, collective, authority
Consensus of opinion
Perception of ease of transfer/implementation
Other
Organisational issues
Communication
Planning
Workloads
Partnerships/joint working/negotiation
Current practice
Perception of new practice as relevant and consistent with attitudes of project leaders etc
Opinion leader/champion
Other
Readiness for change
Need for improvement – level of awareness of those involved in project
Pressure for change
Strategic support – CHP/local authority including social work etc/NHS/ government policy
Consultation with those implementing the new practice/those using the new practice
Resources – Immediate needs/other needs
Training
Equipment
Funding
Space
Staffing
Opinion leader/champion
Other

Transfer/implementation process
Adaptation –
Extent of evidence selected
Changes made
Transferable/non transferable elements
Context into which implementation occurs eg local issues, partnerships
Communication – meetings/contacts/ Partnerships
Strategies for implementation
Leadership
Resources necessary for transfer -
Staffing
Equipment
Training
Funding
Potential barriers to transfer eg professional, individual
Elements enabling transfer
Views, perceptions of those responsible for carrying out new practice
Decisions/actions
Local issues
Other
Post implementation
Management/strategic issues
Adaptation – what changes were made
Barriers against transfer/implementation
Factors that enabled transfer/implementation
Use of resources
Embedding of new practice
Other